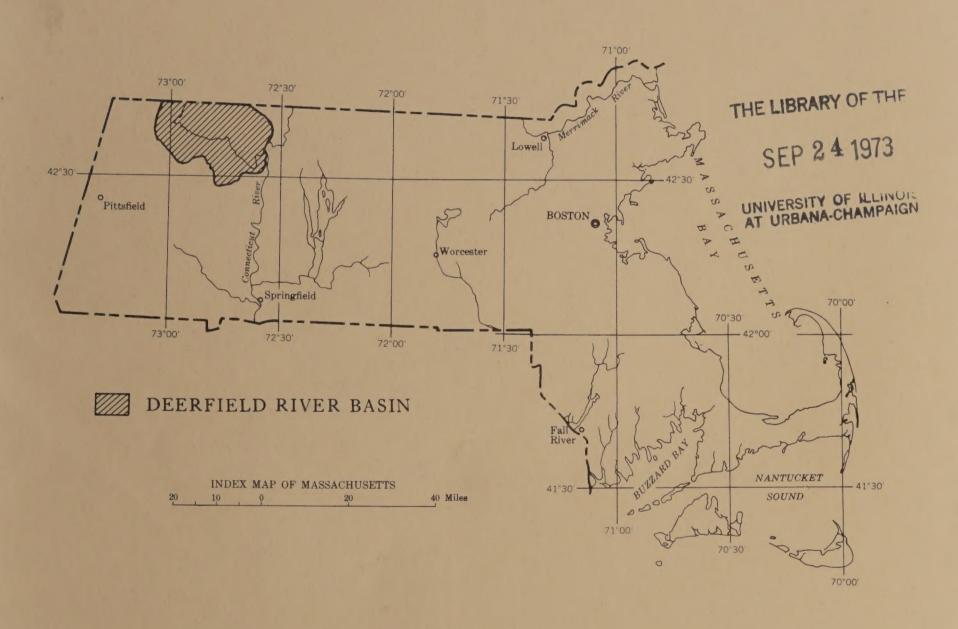
## UNITED STATES DEPARTMENT OF THE INTERIOR GEOLOGICAL SURVEY

MASSACHUSETTS HYDROLOGIC-DATA REPORT No. 13

# HYDROLOGIC DATA OF THE DEERFIELD RIVER BASIN, MASSACHUSETTS

BY
BRUCE P. HANSEN, FREDERICK B.GAY, AND L.G. TOLER



THE COMMONWEALTH OF MASSACHUSETTS
WATER RESOURCES COMMISSION

1973



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### HYDROLOGIC DATA OF THE DEERFIELD RIVER BASIN, MASSACHUSETTS

Ву

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Massachusetts Hydrologic-Data Report No. 13

Records of surface-water discharges, selected wells and borings, seismic surveys, and chemical analyses of water in the Deerfield River basin, Massachusetts

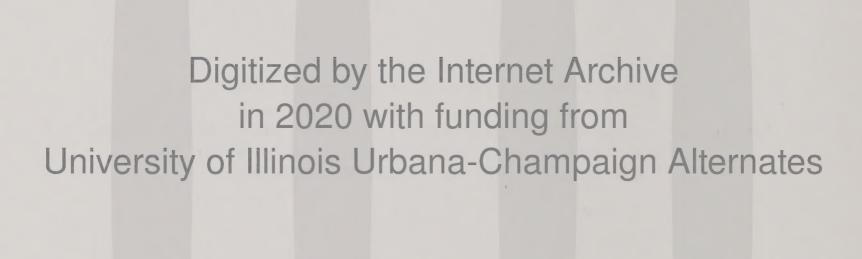
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#### INTRODUCTION

The Deerfield River, a tributary to the Connecticut River, is located in northwestern Massachusetts and south-central Vermont. It has a drainage basin area of 664 square miles, of which 348 square miles lies within Massachusetts. This report covers only that part within Massachusetts and includes all, or parts of, the towns of Ashfield, Bernardston, Buckland, Charlemont, Colrain, Conway, Deerfield, Florida, Greenfield, Hawley, Heath, Leyden, Monroe, Plainfield, Rowe, Savoy, and Shelburne.

Hydrologic data collected during an investigation of the water resources of the Deerfield River basin are presented in tabular form. This investigation was conducted by the U.S. Geological Survey in cooperation with the Massachusetts Water Resources Commission. The data are released in order to make available to the public basic hydrologic and related information that will facilitate the planning of water-resources development and will complement an interpretative report of the area to be published at a later date.

Data presented in this report include selected information on wells and test borings, seismic surveys, streamflow records, chemical analyses of surface and ground water and of rainfall, and suspended-sediment concentrations of surface water (see Plate 1 for locations of all hydrologic-data collection sites).

The authors wish to acknowledge the public officials, consulting firms, industrial concerns, well drillers, and individual homeowners who have given their time and information to this study.

#### DEFINITION OF TERMS

Definition of terms related to streamflow, water quality, and other hydrologic data, as used in this report, are defined as follows:

Color is expressed in units of the platinum-cobalt scale proposed by Hazen (1892, p. 427-428). A unit of color is produced by one milligram per liter of platinum in the form of the chloroplatinate ion.

The extent to which water is colored by material in solution is reported as part of the water analysis because a significant color in water may indicate the presence of organic material that may have some bearing on the dissolved-solids content.

Cubic feet per second per square mile is the average number of cubic feet of water flowing per second from each square mile of area drained, assuming that the runoff is distributed uniformly in time and area.

Cubic foot per second (cfs) is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second and is equivalent to 7.48 gallons per second, 448.8 gallons per minute, or 646,317 gallons per day.

Discharge is the volume of water (or more broadly, total fluids) that passes a given point within a given period of time.

Mean discharge is the arithmetic average of individual daily mean discharges during a specific period.

<u>Instantaneous discharge</u> is the discharge at a particular instant of time. If this discharge is reported instead of the daily mean, the heading of the discharge column in the tables is "Discharge (cfs)."

Drainage area of a stream at a specified location is that area, measured in a horizontal plane, enclosed by a topographic divide from which direct surface runoff from precipitation normally drains by gravity into the stream above the specified point. Figures of drainage area given herein include all closed basins, or noncontributing areas, within the area unless otherwise noted.

Gage height is the water-surface elevation referred to some arbitrary gage datum.

Gaging station is a particular site on a stream where systematic observations of gage height or discharge are obtained. When used in connection with a discharge record, the term is applied only to those gaging stations where a continuous record of discharge is obtained.

Hardness of water is a physical-chemical characteristic attributable to the presence of alkaline earths (principally calcium and magnesium) and is expressed as equivalent calcium carbonate (CaCO3).

Micrograms per liter ( $\mu$ g/l, UG/L) is a more precise unit for expressing the concentration of chemical constituents in solution. One thousand micrograms per liter is equivalent to one milligram per liter. See below.

Milligrams per liter (mg/l, MG/L) is a unit for expressing the concentration of chemical constituents in solution. Milligrams per liter represents the weight of solute per unit volume of water. Milligrams or micrograms per liter may be converted to milliequivalents (one thousandth of a gram-equivalent weight of a constituent) per liter by multiplying by the factors in the table below. Concentration of suspended sediment expressed in milligrams per liter is based on the weight of sediment in a liter of water-sediment mixture.

Ion	Multiply by	Ion	Multiply by
Aluminum (Al + 3)*	0.11119	Lead (Pb + 2)*	0.00965
Bicarbonate (HCO <sub>3</sub> <sup>-1</sup> )	.01639	Lithium (Li <sup>+1</sup> )*	.14411
Calcium (Ca <sup>+2</sup> )	.04990	Magnesium $(Mg^{+2})$	.08226
Carbonate $(CO_3^{-2})$	.03333	Manganese (Mn+2)*	.03640
Chloride (Cl <sup>-1</sup> )	.02821	Nitrate $(NO_3^{-1})$	.01613
Chromium $(Cr^{+6})*$	.11539	Potassium $(K^{+1})$	.02557
Cobalt (Co+2)*	.03394	Sodium (Na + 1)	.04350
Copper (Cu <sup>+2</sup> )*	.03148	Strontium (Sr <sup>+2</sup> )*	.02283
Fluoride $(F^{-1})$	.05264	Sulfate $(SO_{\mu}^{-2})$	.02082
Iron (Fe +3)*	.05372	Zinc $(Zn + 2) * \dots$	.03060

\*Constituent reported in micrograms per liter; multiply by factor and divide results by 1,000.

pH is a symbol denoting the relative concentration of hydrogen ions in a solution; pH values range from 0 to 14--the lower the value, the more acid is the solution; i.e., the more hydrogen ions it contains.

Runoff in inches shows the depth to which the drainage area would be covered if all the runoff for a given time period were uniformly distributed on it.

Sediment is solid material that originates mostly from disintegrated rocks and is transported by, suspended in, or deposited from water; it includes chemical and biochemical precipitates and decomposed organic material such as humus. The quantity, characteristics, and cause of the occurrence of sediment in streams are influenced by environmental factors. Some major factors are degree of slope, length of slope, soil characteristics, land usage, and quantity and intensity of precipitation.

Sediment discharge is the rate at which dry weight of sediment passes a section of a stream or is the quantity of sediment, as measured by dry weight, or by volume, that is discharged in a given time.

Solute is any substance derived from the atmosphere, vegetation, soil, or rocks that is dissolved in water.

Specific conductance is a measure of the ability of a water to conduct an electrical current and is expressed in micromhos per centimeter at 25°C. Because the specific conductance is related to the number and specific chemical types of ions in solution, it can be used for approximating the dissolved-solids content in the water. Commonly, the amount of dissolved solids (in milligrams per liter) is about 65 percent of the specific conductance (in micromhos). This relation is not constant from stream to stream or from well to well, and it may even vary in the same source with changes in the composition of the water.

Suspended sediment is the sediment that at any given time is maintained in suspension by the upward components of turbulent currents or that exists in suspension as a colloid.

Tons per day is the quantity of a substance in solution or suspension that passes a stream section during a 24-hour period.

WSP is used as an abbreviation for "Water-Supply Paper" in references to previously published reports.

#### NUMBERING AND LOCATION OF HYDROLOGIC-DATA COLLECTION SITES

#### Surface-Water Stations

Records are listed in a downstream direction along the main stream, and stations on tributaries are listed between stations on the main stream in the order in which those tributaries enter the main stream. Stations on tributaries entering above all mainstream stations are listed before the first mainstream station. Stations on tributaries to tributaries are listed in a similar manner. All stations are numbered consecutively in downstream order in this report. If a station has been assigned a number for the U.S. Geological Survey national surface-water data network, the network number is shown in parentheses.

#### Ground-Water Sites

The well-numbering system of the U.S. Geological Survey is based on the grid system of latitude and longitude. The number consists of 14 digits and 1 letter. The first 6 digits denote the degrees, minutes, and seconds of latitude followed by a letter denoting north or south. Seven digits following the letter denote degrees, minutes, and seconds of longitude. The last digit is a sequential number for wells within a one-second grid. The system provides the geographic location of the well and a unique number for each well.

A local numbering system for wells and borings is also used in this report. The first two letters of the local well or boring number are town code letters, e.g. GR for Greenfield; the third letter indicates whether the hole is a well (W), auger boring (A), bridge boring (B), or roadway boring (R); and the number indicates the order in which the well or boring

was inventoried within the town. A separate series of numbers beginning with "l" is used within each town. In tables, the complete local number is used; however, on the map (Plate 1), only the number appears beside well locations, or the number plus "A", "B" or "R" for borings within the designating town boundaries.

#### COLLECTION AND EXAMINATION OF HYDROLOGIC DATA

#### Streamflow

The base data collected at continuous-record gaging stations consist of records of stage and measurements of discharge. Records of stage are obtained from a graphic water-stage recorder that gives a continuous record of the fluctuations or from a digital recorder that punches tape at 15-, 30-, or 60-minute intervals. Measurements of discharge are made with a current meter, using the general methods adopted by the Geological Survey on the basis of experience in stream gaging since 1888. These methods are described in standard textbooks on the measurement of stream discharge. (See also SELECTED REFERENCES.)

More detailed information than that published for the gaging stations, such as discharge measurements, gage-height record, and rating tables, is on file in the district office. The long-term gaging-station records (through 1967) have been analyzed to give several statistical summaries, including (1) the number of days in each year that the daily discharge was between selected limits (duration tables); (2) the lowest mean discharge for selected numbers of consecutive days in each year; and (3) the highest mean discharge for selected numbers of consecutive days in each year.

Measurements of streamflow made at low-flow discharge stations are made during periods of base flow when streamflow is primarily from ground-water storage. These measurements, when correlated with the simultaneous discharge of a nearby stream where continuous records are available, will give a picture of the low-flow potentiality of the stream.

#### Solutes

The methods of collecting and analyzing the water samples for determining the kinds and concentrations of solutes are described by Brown and others (1970). One sample can define adequately the water quality at given time if the mixture of solutes throughout the stream cross section is homogeneous. However, the concentration of solutes at different locations in the cross section may vary widely with different rates of water discharge, depending on the source of material and the turbulence and mixing of the stream. Some streams must be sampled at several verticals across the channel to determine accurately the solute load.

Ground-water quality does not change significantly during short periods of time; infrequent sampling and analysis of ground water adequately define ground-water quality at a given site. Water samples from wells are analyzed individually.

Solids are dissolved from the atmosphere by precipitation. The amount and type of solids may be affected by the source of airborne particles, the wind direction and velocity, and the rainfall intensity and duration. Samples of rainfall were collected monthly during selected periods.

#### Temperature

Most large streams have a small diurnal temperature change, while small, shallow streams may have a daily range of several degrees and may follow closely the changes in air temperature. Some streams may be affected by waste-heat discharges. To convert temperature data shown in degrees Celsius (centigrade, °C) to degrees Fahrenheit (°F), see following table:

Temperature conversion table, degrees Celsius (°C) to degrees Fahrenheit (°F) °F = 9/5 (°C) +32 or °C = 5/9 (°F -32)

°C	°F	°C	°F	°C	°F	°C	°F
0.0 .5 1.0 2.0 3.5 4.5 5.0 5.5 6.5 7.0 8.5 9.5	32 33 34 35 36 37 38 39 41 42 43 44 45 47 48 49	10.0 10.5 11.0 11.5 12.0 13.0 13.5 14.0 14.5 15.0 15.5 16.0 16.5 17.0 18.0 18.5	50 51 52 53 54 55 56 57 58 59 61 62 63 64 65 66 67	20.0 20.5 21.0 21.5 22.0 23.5 24.0 24.5 25.0 25.5 26.0 26.5 27.0 28.0 28.5 29.0	68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85	30.0 30.5 31.0 31.5 32.0 33.5 34.0 34.5 35.0 36.0 36.5 37.0 38.0 38.5	86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103

#### Sediment

Suspended-sediment samples were collected periodically, particularly during periods of storm runoff when most of the suspended-sediment load is transported. Although data collected periodically may represent conditions only at the time of observations, such data are useful in establishing seasonal relations between quality and streamflow in predicting long-term sediment-discharge characteristics of the stream.

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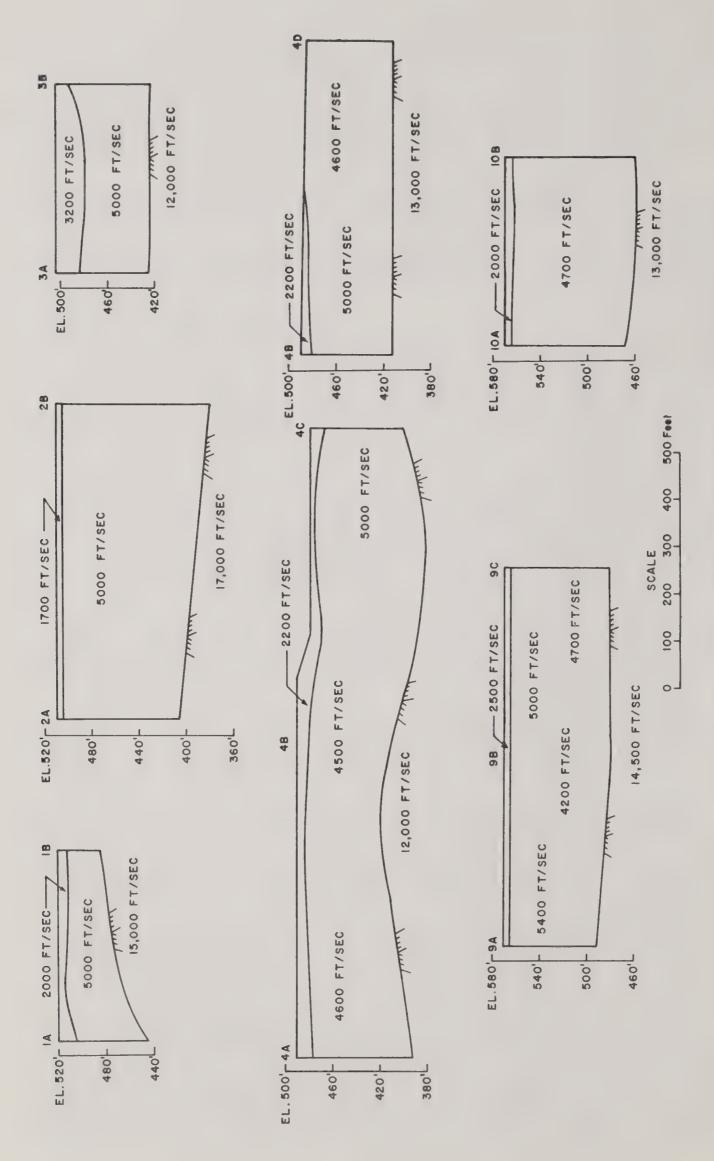


Figure 1.-- Profile sections of selected seismic surveys

These profiles are the result of meismic survey completed in July 1967 by Weston Geophysical Engineers, Inc., for the U.S. Geological Survey, Water Resources Division, at Buckland-Charlemont, Massachusetts. Seismic velocities are used to estimate overburden thickness at designated locations selected for the study of ground-water potential.

Profile sections indicate thick overburden deposits at all sites. Overburden velocities of 5000 ft/sec indicate coarse material; velocities appearing on profile sections below 48000 ft/sec is an an average of the whole overburden column; hence, coarser material such as sill. However, where 5000 ft/sec velocities are shown. It should be noted that slower velocities as shown under the 5400 ft/sec velocities, such as the 94-9¢ profile, do not indicate lower-velocity material at depth. These velocities are shown on the map (Plate 1).

differences and were offset for drafting convenience. The higher velocities at depth are indicative of bedrock. The locations of seismic lines are shown on the map (Plate 1).

#### Table 1.--Surface-water stations at which data are collected

Type of data--Discharge: continuous record (D), low-flow (LF); Water-quality: chemical (C), suspended sediment (S)

Map refer- ence no. (Plate 1)	Station name and (number)	Location	Drainage area (sq mi)	Type of data collected
1	Deerfield River diversion canal at Monroe Bridge, Mass.	Lat 42°43'15", long 72°57'05", Franklin County, 100 ft below opening on River Rd., 0.5 mile west of Monroe Bridge.		С
2	Dunbar Brook near Monroe Bridge, Mass. (01168130)	Lat 42°43'11", long 72°59'34", Franklin County, 20 ft above culvert on South Rd., 2.6 miles west of Monroe Bridge.	7.01	C, LF
3	Deerfield River near Hoosac Tunnel, Mass.	Lat 42°41'18", long 72°57'42", Berkshire County, 300 ft above power plant and 2.1 miles northeast of Hoosac Tunnel.		С
4	Fife Brook near Hoosac Tunnel, Mass. (01168150)	Lat 42°41'02", long 72°58'41", Berkshire County, at culvert on River Rd., 100 ft above mouth, and 1.2 miles northeast of Hoosac Tunnel.	2.11	C, LF
5	Deerfield River at Zoar, Mass.	Lat 42°39'04", long 72°57'05", Franklin County, 0.2 mile below Florida Bridge on Zoar Rd., 0.8 mile above Pelham Brook, and 1 mile west of Zoar.		С
6	Potter Brook near Rowe, Mass. (01168170)	Lat 42°42'54", long 72°53'05", Franklin County, at culvert on Leshures Rd., 1.7 miles northeast of Rowe.	1.57	C, LF
7	Pelham Brook at Rowe, Mass. (01168200)	Lat 42°41'23", long 72°54'19", Franklin County, 75 ft from Zoar Rd., 300 ft below Shippee Brook, and 0.3 mile southwest of Rowe.	7.19	C, LF
8	Pelham Brook at Zoar, Mass. (01168230)	Lat 42°39'24", long 72°56'09", Franklin County, at culvert on Rowe Rd., 900 ft above mouth, and 0.3 mile northwest of Zoar.	13.5	C, LF
9	Cold River at Florida, Mass. (01168250)	Lat 42°39'58", long 73°01'52", Berkshire County, at culvert on South County Rd., 1 mile west of Florida.	6.48	C, LF
10	Black Brook near Drury, Mass. (01168280)	Lat 42°37'57", long 72°58'29", Berkshire County, 100 ft above mouth, 1.8 miles southeast of Drury.	3.82	C, LF
11	Cold River near Zoar, Mass. (01168300)	Lat 42°38'12", long 72°56'10", Franklin County, at bridge 150 ft east of State Highway 2, 0.9 mile above mouth, and 1.1 miles south of Zoar.	29.6	C, LF
12	Chickley River at West Hawley, Mass. (01168340)	Lat 42°34'39", long 72°56'50", Franklin County, at culvert on State Highway 8A, at West Hawley.	8.71	C, LF
13	King Brook at West Hawley, Mass. (01168350)	Lat 42°34'40", long 72°56'48", Franklin County, 200 ft above mouth, at West Hawley.	5.22	C, IF
1 <sup>1</sup> 4	Mill Brook (tributary to Chickley River) near West Hawley, Mass. (01168370)	Lat 42°36'18", long 72°54'45", Franklin County, at culvert on Middle Rd., 200 ft above mouth, and 2.6 miles northeast of West Hawley.	6.28	C, LF
15	Chickley River near Charlemont, Mass. (01168400)	Lat 42°37'28", long 72°54'27", Franklin County, at bridge on Chickley Rd., 0.5 mile above mouth, and 1.9 miles west of Charlemont.	27.1	C, LF
16	Legate Hill Brook near Charlemont, Mass. (01168430)	Lat 42°38'06", long 72°53'50", Franklin County, at culvert on Legate Hill Rd., 1.4 miles northwest of Charlemont.	2.62	C, LF
17	Deerfield River below Legate Hill Brook, at Charlemont, Mass.	Lat 42°37'33", long 72°53'00", Franklin County, at bridge on State Highway 8A, 100 ft below Legate Hill Brook, and 0.7 mile west of Charlemont.		С
18	Bozrah Brook at Charlemont, Mass. (01168450)	Lat 42°37'28", long 72°52'52", Franklin County, at culvert on West Hawley Rd., 200 ft above mouth, and 0.6 mile southwest of Charlemont.	3.84	C, LF
19	Mill Brook (tributary to Deerfield River) near at culvert on State Highway 8A, 1.7 miles north of Charlemont, Mass. (01168470)		7.78	C, LF
20	Maxwell Brook near Charlemont, Mass. (01168480)	Lat 42°38'49", long 72°52'00", Franklin County, at bridge on State Highway 8A, 800 ft above mouth, and 1.3 miles north of Charlemont.	2.94	C, LF

Table 1.--Surface-water stations at which data are collected--Continued

Map reference no. (Plate 1)	Station name and (number)	Location	Drainage area (sq mi)	Type of data collected
21	Deerfield River at Charlemont, Mass. (01168500)	Lat 42°37'33", long 72°51'20", Franklin County, on left bank 1 mile downstream from Charlemont and 2.5 miles downstream from Chickley River.	362	C, D, S
22	Deerfield River near Charlemont, Mass.	Lat 42°37'07", long 72°49'18", Franklin County, 0.6 mile above Avery Brook, and 2.6 miles east of Charlemont.		С
23	Avery Brook near Charlemont, Mass. (01168520)	Lat 42°37'44", long 72°48'49", Franklin County, at culvert on Heath Rd., 2.9 miles east of Charlemont.	3.88	C, LF
24	Clesson Brook near Buckland, Mass. (01168550)	Lat 42°34'04", long 72°48'35", Franklin County, at culvert on Hawley Rd., 1.9 miles southwest of Buckland.	7.48	C, LF
25	Upper Branch Clesson Brook near Buckland, Mass. (01168600)	Lat 42°34'03", long 72°48'08", Franklin County, at bridge on State Highway 112, 250 ft above mouth, and 1.8 miles south of Buckland.	5 <b>.7</b> 7	C, LF
26	Clesson Brook near Shelburne Falls, Mass. (01168650)	Lat 42°36'47", long 72°46'10", Franklin County, at bridge on State Highway 112, 0.5 mile above mouth, and 1.7 miles northwest of Shelburne Falls.	18.2	C, LF
27	Clark Brook near Shelburne Falls, Mass. (01168700)	Lat 42°36'48", long 72°46'05", Franklin County, at culvert on State Highway 112, 0.3 mile above mouth, and 1.7 miles northwest of Shelburne Falls.	2.78	C, LF
28	East Branch North River below Vermont State line, near Colrain, Mass.	Lat 42°43'42", long 72°42'50", Franklin County, 100 ft above bridge on State Highway 112, 0.7 mile below Vermont State line, and 3.9 miles north of Colrain.		С
29	East Branch North River near Colrain, Mass.	Lat 42°42'43", long 72°42'07", Franklin County, 100 ft above bridge on private road just off State Highway 112, 2.0 miles below Vermont State line, and 2.7 miles north of Colrain.		С
30	East Branch North River at Colrain, Mass.	Lat 42°40'54", long 72°41'20", Franklin County, 0.8 mile above bridge on State Highway 112 and 0.8 mile northeast of Colrain.		C
31	East Branch North River at Lyonsville, Mass.	Lat 42°40'26", long 72°42'52", Franklin County, 0.2 mile above Foundry Brook and 0.2 mile north of Lyonsville.		С
32	Foundry Brook at Lyonsville, Mass. (01168800)	Lat 42°40'26", long 72°43'09", Franklin County, at culvert on Adamsville Rd., 500 ft above mouth, and 0.2 mile northwest of Lyonsville.	2.13	C, LF
33	East Branch North River at Griswoldville, Mass.	Lat 42°40'05", long 72°43'16", Franklin County, 0.4 mile below Foundry Brook, 0.4 mile above mouth, and 0.9 mile north of Griswoldville.	**	С
34	West Branch Brook at North Heath, Mass. (01168850)	Lat 42°42'17", long 72°50'09", Franklin County, at bridge on State Highway 8A, 0.5 mile west of North Heath.	6.90	C, LF
35	Sanders Brook near North Heath, Mass. (01168900)	Lat 42°42'14", long 72°47'00", Franklin County, at culvert on Colrain Rd., 100 ft above mouth, and 2.2 miles east of North Heath.	4.00	C, LF
36	Taylor Brook near Lyonsville, Mass. (01168940)	Lat 42°40'42", long 72°44'31", Franklin County, at bridge on Heath Rd., 1,000 ft above mouth, and 1.4 miles northwest of Lyonsville.	5.20	C, LF
37	West Branch North River at Lyonsville, Mass. (01168950)	Lat 42°40'15", long 72°43'43", Franklin County, at bridge on private road, 50 ft southwest of Adamsville Rd., 0.8 mile above mouth, and 0.6 mile west of Lyonsville.	29.8	C, LF
38	North River at Shattuckville, Mass. (01169000)	Lat 42°38'18", long 72°43'32", Franklin County, on right bank in Shattuckville, 1.2 miles south of Griswoldville and 1.3 miles upstream from mouth.	88.4	C, D, S
39	Deerfield River at Shelburne Falls, Mass.	Lat 42°36'47", long 72°44'14", Franklin County, at bridge on State Highway 2, 0.7 mile north of Shelburne Falls.	w es	С
40	Deerfield River near Shelburne, Mass.	Lat 42°34'22", long 72°42'28", Franklin County, just below power plant, 1.5 miles southwest of Shelburne.		С

Table 1.--Surface-water stations at which data are collected--Continued

Map reference no. (Plate 1)	Station name and (number)	Location	Drainage area (sq mi)	Type of data collected
41	Bear River near Conway, Mass. (01169600)	Lat 42°32'45", long 72°43'15", Franklin County, at bridge on Shelburne Falls Rd., 2.7 miles northwest of Conway.	10.5	C, LF
42	Dragon Brook at Shelburne, Mass. (01169650)	Lat 42°34'39", long 72°41'06", Franklin County, at culvert on Bardwell Ferry Rd., 0.8 mile south of Shelburne.	3.57	C, LF
43	Creamery Brook at South Ashfield, Mass. (01169700)	Lat 42°30'30", long 72°46'35", Franklin County, at bridge on Williamsburg Rd., 1,200 ft above mouth, and 0.1 mile south of South Ashfield.	3.65	C, LF
44	Poland Brook near Conway, Mass. (01169800)	Iat 42°29'16", long 72°44'47", Franklin County, at bridge on Poland Rd., 2.8 miles southwest of Conway.	4.03	C, LF
45	South River near Conway, Mass. (01169900)	Lat 42°32'31", long 72°41'39", Franklin County, on left bank at downstream side of Reeds Bridge just off Bardwell Rd., 2.2 miles north of Conway, and 2.6 miles upstream from mouth.	24.0	C, D, S
46	Deerfield River near West Deerfield, Mass. (01170000)	Lat 42°32'09", long 72°39'14", Franklin County, on right bank 0.4 mile downstream from South River, 1.2 miles west of West Deerfield, and 2.5 miles west of Deerfield.	558	C, D, S
47	Deerfield River at West Deerfield, Mass.	Lat 42°31'20", long 72°37'33", Franklin County, 100 ft below bridge on Interstate Highway 91, and 0.8 mile south of West Deerfield.		C
48	Green River near Leyden, Mass. (01170070)	Lat 42°43'38", long 72°40'32", Franklin County, 400 ft above Borden Brook, 0.4 mile below Vermont State line, and 2.9 miles northwest of Leyden.	35.0	C, LF
49	Borden Brook near Leyden, Mass.	Lat 42°43'37", long 72°40'37", Franklin County, at culvert on Green River Rd., 100 ft above mouth, and 2.9 miles northwest of Leyden.		С
50	Green River near Colrain, Mass. (01170100)	Lat 42°42'12", long 72°40'16", Franklin County, on right bank 0.5 mile upstream from bridge on West Leyden Rd., and 2.5 miles northeast of Colrain.	41.4	C, D, S
51	Stafford Brook near Colrain, Mass. (01170120)	Lat 42°40'47", long 72°39'15", Franklin County, at culvert on Green River Rd., 200 ft above mouth, and 2.3 miles east of Colrain.	2.39	C, LF
52	Green River near Greenfield, Mass. (01170140)	Lat 42°39'16", long 72°37'33", Franklin County, 100 ft above Workman Brook, 300 ft east of Green River Rd., and 5 miles northwest of Greenfield.	50.8	C, LF
53	Green River at Greenfield water supply dam, near Greenfield, Mass.	<pre>Iat 42°38'48", long 72°37'15", Franklin County, at Greenfield water supply dam, 200 ft above bridge, and 4.2 miles northwest of Greenfield.</pre>		С
54	Glen Brook near Leyden, Mass. (01170160)	Lat 42°41'09", long 72°37'42", Franklin County, at culvert on private road, 1.1 miles south of Leyden.	2.32	C, LF
55	Punch Brook near Greenfield, Mass. (01170180)	Lat 42°37'17", long 72°37'32", Franklin County, at culvert on Plain Rd., 900 ft above mouth, and 2.6 miles northwest of Greenfield.	6.35	C, LF
56	Mill Brook (tributary to Green River) near Bernardston, Mass.	Lat 42°39'33", long 72°34'18", Franklin County, at culvert on Eden Trail, 1.3 miles southwest of Bernardston.	••	LF
57	Mill Brook (tributary to Green River) near Greenfield, Mass.	Lat 42°38'37", long 72°35'03", Franklin County, at bridge on Log Plain Rd., 4 miles northeast of Greenfield.	4.38	C, LF
58	Green River below Lat 42°36'14", long 72°36'55", Franklin County, Mill Brook, near O.2 mile below Mill Brook, 1.3 miles northwest of Greenfield.			С
59	Green River at Greenfield, Mass.	Lat 42°34'34", long 72°35'57", Franklin County, 0.8 mile above mouth, 0.8 mile south of Greenfield.		С
60	Deerfield River near Greenfield, Mass.	Lat 42°34'13", long 72°35'12", Franklin County, 0.3 mile below bridge on U.S. Highway 5, 0.8 mile above mouth, and 1.4 miles southeast of Greenfield.		С

21. Deerfield River at Charlemont, Mass.

DRAINAGE AREA. -- 362 sq mi.

PERIOD OF RECORD. -- June 1913 to September 1969.

CAGE.--Water-stage recorder. Datum of gage is 517.36 ft above mean sea level, datum of 1929.

AVERAGE DISCHARGE.--56 years (1913-69), 875 cfs (32.82 inches per year), adjusted for storage.

EXTREMES.--1913-69: Maximum discharge, 56,300 cfs Sept. 21, 1938 (gage height, 20.17 ft, from floodmarks), from rating curve extended above 31,000 cfs on basis of slope-area and contracted-opening measurements at gage heights 17.75 and 20.17 ft; minimum daily, 5 cfs June 17, 1921.

REMARKS.--Flow regulated by Somerset Reservoir, since 1924 by Harriman Reservoir, and by several powerplants above station.

Monthly and yearly mean discharge, in cubic feet per second (observed)

Water	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	NUL	JUL	AUG	SEP	The year
1913 1914 1915	540 90.8	1,170 177	- 616 133	- 363 761	298 1,400	1,360 515	4,120 1,570	1,230 396	- 279 224	175 477 1,610	219 587 1,190	167 190 541	- 935 712
1916	600	715	1,180	1,290	1,130	728	2,860	1,370	890	569	427	439	1,010
1917	436	747	691	572	590	1,250	2,410	1,410	860	296	299	309	821
1918	727	443	433	384	808	1,480	2,500	885	407	225	305	426	749
1919	527	599	969	583	268	1,990	1,590	2,030	344	274	269	819	860
1920	699	1,450	877	440	415	2,190	3,160	1,010	875	418	389	364	1,020
1921	591	748	1,670	724	669	3,640	1,270	874	425	614	337	270	993
1922	270	691	751	537	539	2,110	3,110	1,370	1,190	318	484	437	984
1923	366	338	234	636	522	1,050	3,290	911	554	226	139	244	706
1924	1,060	970	1,630	1,190	360	491	1,520	1,460	550	574	397	524	896
1925	681	429	683	526	948	1,290	964	729	619	562	665	676 •	730
1926	615	1,020	1,220	1,070	1,130	630	1,700	771	639	768	497	406	869
1927	453	825	840	878	915	1,430	694	555	581	616	721	700	767
1928	746	2,100	2,030	1,810	1,600	1,290	1,300	1,050	1,410	946	1,100	1,020	1,360
1929	930	863	579	667	831	1,750	2,450	1,630	668	642	527	398	995
1930	542	319	524	957	1,110	1,050	664	509	535	521	525	341	631
1931	352	407	598	389	331	429	1,630	1,400	1,330	482	477	496	693
1932	572	330	823	1,070	1,260	1,190	1,390	451	478	205	530	623	741
1933	569	1,070	1,070	1,230	1,000	760	2,330	725	753	416	226	763	905
1934	525	717	786	961	601	981	1,836	737	589	643	465	527	781
1935	603	761	1,030	1,457	1,348	1,490	898	568	336	632	712	678	874
1936	679	439	720	928	504	3,521	1,920	563	693	443	394	325	931
1937	310	904	1,133	1,766	1,694	698	1,586	1,998	485	342	333	602	983
1938	1,067	1,424	1,355	1,176	1,412	1,709	827	433	564	718	826	2,404	1,156
1939	857	915	1,214	1,106	1,172	1,527	2,217	941	594	135	287	387	943
1940	324	675	605	488	297	450	2,146	2,775	932	501	562	380	846
1941	384	705	1,048	1,033	1,294	1,106	1,167	328	188	136	319	342	667
1942	211	337	729	947	992	1,090	2,177	700	390	366	220	366	707
1943	479	1,226	1,010	971	1,113	1,483	1,717	2,889	750	321	367	419	1,062
1944	507	1,234	965	783	531	619	2,097	578	674	248	359	429	749
1945	342	717	845	751	964	2,107	1,790	2,036	1,269	1,006	502	359	1,058
1946	529	843	876	1,112	995	1,542	687	1,402	939	393	268	415	833
1947	342	344	575	874	1,005	1,491	2,994	1,926	676	517	429	525	973
1948	571	456	419	659	580	2,139	1,827	1,934	1,015	398	322	439	898
1949	219	242	1,770	2,001	1,063	1,643	948	499	401	134	189	31 <sup>4</sup>	786
1950	441	667	592	979	825	984	2,337	1,039	754	299	386	555	819
1951	461	1,204	1,479	1,064	1,316	1,797	2,487	678	599	655	439	682	1,068
1952	1,039	1,602	1,212	1,321	1,238	1,630	2,371	1,429	1,469	492	321	409	1,208
1953	372	373	985	967	1,266	3,042	1,798	2,045	392	240	311	74.0	990
1954	314	391	1,025	794	1,023	1,325	1,293	1,532	556	229	371	719	796
1955	583	1,783	1,397	1,130	1,046	1,414	2,389	539	399	265	922	547	1,032
1956	2,766	2,123	1,043	1,022	748	874	1,975	1,755	764	275	287	550	1,182
1957	506	721	930	939	1,000	1,191	698	452	214	217	342	368	630
1958	362	753	1,119	1,020	1,047	882	2,730	1,095	367	279	408	384	867
1959	460	758	849	971	1,062	1,022	1,675	577	270	355	327	277	714
1960	796	1,802	1,513	1,185	1,250	1,381	3,040	791	784	346	457	1,128	1,201
1961	811	904	858	570	717	1,165	1,791	1,266	347	194	395	356	781
1962	406	405	822	824	618	644	2,202	805	299	78.1	149	270	625
1963	325	715	1,112	857	800	1,247	1,852	837	289	289	215	347	739
1964	314	434	765	948	1,067	1,655	1,813	320	238	364	131	154	682
1965	292	187	250	495	704	809	1,313	332	391	299	252	172	455
1966	365	479	750	1,049	1,115	1,551	1,183	499	431	387	298	621	725
1967	570	873	728	719	940	819	1,911	1,278	748	482	418	436	824
1968	454	706	972	1,054	907	1,302	788	952	1,161	412	393	246	779
1969	289	655	1,451	1,079	999	927	3,468	1,218	1,024	601	1,020	456	1,096

21. Deerfield River at Charlemont, Mass.--Continued

Monthly and yearly runoff, in inches (adjusted) a/

Water year	OCT	MOA	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	The year
1913 1914 1915	1.89 •32	4.04 .65	2.09	1.23 2.72	0.89 4.37	4.55 1.73	13.61 5.37	4.43 1.44	0.56 •39	0.33 .80 5.42	0.25 .78 4.05	0.53 .20 1.43	35.0° 28.40
1916 1917 1918 1919 1920	1.57 .95 2.43 1.84 2.42	2.14 2.33 1.17 1.98 4.74	3.60 2.04 .77 3.25 2.73	4.39 1.53 .69 1.94	3.52 1.17 2.26 .52 .39	2.41 4.17 5.03 6.91 7.26	9.50 8.08 8.45 5.24 10.60	4.90 5.03 3.29 6.88 3.63	2.96 2.97 1.46 .78 2.92	1.75 .86 .36 .48 1.28	.59 .88 .33 .64 1.04	.96 .43 1.32 2.60	38.2 30.4 27.5 33.0 38.4
1921 1922 1923 1924 1925	1.88 .68 .61 3.31 .92	2.57 2.21 .95 3.05 1.45	5.64 2.59 .69 5.51 1.89	1.98 1.20 2.19 3.79 .52	1.34 1.42 1.03 .80 4.52	12.57 7.07 3.47 1.65 6.88	4.25 10.58 11.03 9.90 4.65	2.88 4.75 3.18 6.65 2.32	1.00 3.95 1.64 .81 1.34	1.97 .71 .56 .3 <sup>4</sup> 1.80	.68 1.05 .40 .30	.30 .63 .71 .86	37.0 36.8 26.4 36.9 28.3
1926 1927 1928 1929 1930	2.03 1.65 2.71 .90	4.76 4.28 9.99 1.10 1.26	3.49 1.38 5.83 1.61 1.73	1.24 1.38 3.92 2.14 3.29	.65 1.16 2.54 .87 2.94	1.82 7.32 3.38 9.30 4.23	9.63 4.35 7.40 10.72 3.73	4.62 3.04 6.09 5.70 2.59	1.52 1.54 4.20 .98 2.04	.46 1.11 2.69 .47	.34 1.09 3.38 .20	.52 .94 1.77 .28 .23	31.0 29.2 53.9 34.2 23.6
1931 1932 1933 1934 1935	.26 .47 2.22 1.50 1.59	1.36 1.17 5.49 1.48 2.98	.89 2.95 1.35 1.99 2.88	.52 5.10 2.44 2.17 4.52	.41 1.60 1.20 .53 1.00	1.51 1.33 1.27 4.05 5.16	10.76 9.34 12.83 10.58 4.59	5.54 2.86 2.90 2.65 3.45	4.04 .70 .40 2.29 1.72	1.27 .73 .28 .50 3.06	.39 .65 1.51 .21	.73 .22 2.15 1.80	27.66 27.12 34.04 29.75 32.15
1936 1937 1938 1939 1940	.43 1.92 3.29 1.57	2.61 2.21 4.84 1.60 1.48	1.28 4.65 2.12 4.48 1.41	1.87 5.87 3.45 1.61 .35	•77 2.99 3.55 1.93 •45	17.18 1.18 5.16 3.78 .88	6.48 8.23 4.24 11.49	2.01 7.26 2.72 3.54 10.85	.78 1.78 1.22 .70 2.88	.69 .76 3.80 .28 1.29	.89 .49 1.68 .46	.55 1.08 8.50 .62 1.40	35.5 38.4 44.5 32.0 33.6
1941 1942 1943 1944 1945	.41 1.40 1.25 1.65 1.05	2.91 2.01 4.06 4.12 •99	3.49 2.02 2.09 .96 1.92	1.53 2.36 1.23 .64 2.05	2.10 .92 1.94 .75 1.30	1.32 4.92 4.61 3.54 10.80	6.59 9.58 8.02 9.66 6.56	1.67 3.25 11.23 2.56 6.55	1.01 1.14 2.12 2.69 3.73	.79 1.11 .56 .69 3.05	.39 .49 1.02 .20	•75 •97 •22 1•17 •96	22.90 30.1° 38.3° 28.6° 39.6°
1946 1947 1948 1949 1950	1.91 1.65 .31 .29	2.85 1.11 2.16 1.65 •99	1.53 1.40 1.16 7.12 2.83	2.72 2.24 .77 5.00 4.60	1.37 1.94 1.38 2.69 1.45	7.69 3.60 9.98 5.14 2.98	2.40 12.41 6.67 4.19 9.24	5.20 7.27 6.36 2.13 3.56	2.50 2.29 3.22 .41 2.02	.65 1.65 .81 .34 .50	.67 .91 .34 .23	.70 .39 .08 .71 1.98	30.19 36.80 33.20 29.90 31.7
1951 1952 1953 1954 1955	1.01 3.56 .22 .47 1.54	4.80 5.14 1.17 .81 5.94	3.83 3.67 3.30 3.93 4.16	2.99 4.29 3.18 1.37 1.35	3.48 2.49 3.06 3.03 1.70	4.77 2.51 12.21 5.03 4.35	10.20 11.48 6.48 6.16 11.45	2.43 5.18 6.46 5.41 1.84	1.79 4.16 .69 1.36	1.88 .48 .20 .37 .28	1.25 .49 .25 .82 3.06	1.18 .66 .11 2.71	39.63 44.13 37.33 31.47 37.10
1956 1957 1958 1959 1960	10.76 .64 .40 1.26 4.22	5.73 2.40 2.05 2.09 6.21	1.03 3.19 5.57 1.33 3.93	2.69 2.57 1.67 3.20 2.50	1.03 1.65 .89 1.25 2.34	1.35 2.67 1.35 2.45 2.35	10.10 4.58 13.97 10.09 14.40	7.89 2.80 4.38 2.20 2.95	2.06 1.00 .82 1.13 1.52	.76 .88 .88 .48	.17 .12 .44 .48	•93 •35 •83 •38 4•07	44.50 22.89 33.29 26.30 46.10
1961 1962 1963 1964 19 <b>6</b> 5	1.60 .30 1.67 .20	2.21 1.23 2.24 2.90 .47	1.24 1.23 2.43 2.31 1.67	.61 1.92 .85 2.21	1.90 .80 .62 1.12	3.74 1.81 3.22 4.91 .93	8.81 12.25 9.71 9.81 7.25	5.47 3.18 4.20 1.45 2.27	1.17 .51 .87 .33 .52	.60 .17 .24 .25	.61 .40 .36 .31	.47 .37 .28 .05	28.4; 24.1; 26.6; 25.8; 16.7;
1966 1967 1968 1969	2.39 1.86 1.59 .54	2.38 2.95 1.78 3.17	2.02 1.60 3.52 4.34	1.66 1.79 1.05 1.29	1.65 1.03 1.03 1.00	3.78 1.58 7.56 1.89	6.65 10.88 4.62 17.37	3.58 5.30 2.90 3.67	1.17 1.96 3.67 2.98	.36 1.56 .77 1.91	.22 1.04 .06 1.67	1.06 .40 .61	26.92 31.99 29.10 40.33

a/ Adjusted for change in contents in Somerset and Harriman Reservoirs.

#### 21. Deerfield River at Charlemont, Mass.--Continued

Yearly discharge, in cubic feet per second

			W.	later year en	ding Sept.	30			С	alendar yes	r
Year	WSP		Observed				Adjustedª/		Observed	Adju	steda/
2 6642	77.03	Moment Discharge	ary maximum Date	Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches
1914	381	18,200	Apr. 20, 1914	30	935	936	2.59	35.07	774	761	28.53
1915	401, 781	38,200	July 8, 1915	29	712	756		28.40	889	912	34.23
1916 1917 1918 1919 1920	431 451 471 501	11,500 9,760 8,250 27,500 18,400	Dec. 26, 1915 Apr. 21, 1917 Apr. 3, 1918 Mar. 28, 1919 Apr. 13, 1920	191 90 46 64 81	1,010 821 749 860 1,020	1,020 814 735 881 1,020	2.82 2.25 2.03 2.43 2.82	38.29 30.44 27.56 33.06 38.44	960 799 791 937 1,023	965 786 806 956 1,029	36.30 29.49 30.26 35.88 38.64
1921	521	32,400	Mar. 9, 1921	5	993	991	2.74	37.06	882	867	32.45
1922	541	21,000	Apr. 12, 1922	62	984	982	2.71	36.84	919	896	33.61
1923	561	14,900	Apr. 29, 1923	54	706	706	1.95	26.46	935	962	36.08
1924	581	16,600	Oct. 24, 1923	57	896	983	2.72	36.97	739	781	29.36
1925	601	9,330	Feb. 12, 1925	70	730	755	2.09	28.34	818	915	34.36
1926	621	7,980	Apr. 25, 1926	90	869	829	2.29	31.08	807	750	28.11
1927	641	5,470	Mar. 19, 1927	96	767	780	2.15	29.24	998	1,079	40.46
1928	661	36,000	Nov. 3, 1927	132	1,360	1,430	3.95	53.90	1,156	1,036	38.98
1929	681	12,100	Apr. 29, 1929	28	995	914	2.52	34.27	913	912	34.23
1930	696	4,400	Mar. 26, 1930	45	631	632	1.75	23.69	628	605	22.63
1931	711	18,900	June 10, 1931	75	693	738	2.04	27.68	724	793	29.76
1932	726	6,070	Apr. 12, 1932	42	741	721	1.99	27.12	822	839	31.59
1933	741	13,000	Nov. 19, 1932	48	905	909	2.51	34.04	848	801	29.95
1934	756	11,600	Apr. 12, 1934	71	781	793	2.19	29.75	812	859	32.23
1935	781	11,300	Jan. 9, 1935	104	874	859	2.37	32.19	828	775	29.06
1936	801	32,200	Mar. 18, 1936	71	931	945	2.61	35.54	973	1,064	40.00
1937	821	15,800	May 15, 1937	72	983	1,026	2.83	38.42	1,109	1,065	39.89
1938	851	56,300	Sept. 21, 1938	108	1,156	1,189	3.28	44.57	1,084	1,119	41.97
1939	871	11,400	Apr. 19, 1939	54	943	854	2.36	32.06	.827	751	28.23
1940	891	14,000	May 3, 1940	57	846	896	2.48	33.68	891	975	36.67
1941	921	4,500	Feb. 8, 1941	56	667	612	1.69	22.96	594	575	21.58
1942	951	5,950	Apr. 8, 1942	64	707	804	2.22	30.17	827	857	32.14
1943	971	14,000	May 13, 1943	95	1,062	1,023	2.83	38.35	1,061	1,005	37.68
1944	1001	13,700	June 24, 1944	85	749	762	2.10	28.63	683	688	25.86
1945	1031	15,000	Apr. 26, 1945	98	1,058	1,059	2.93	39.68	1,087	1,121	42.01
1946	1051	7,120	May 28, 1946	77	833	805	2.22	30.19	751	748	28.06
1947	1081	12,000	Apr. 12, 1947	82	973	983	2.72	36.86	988	969	36.33
1948	1111	12,200	Mar. 22, 1948	54	898	884	2.44	33.24	965	1,029	38.67
1949	1141	42,600	Dec. 31, 1948	44	786	797	2.20	29.90	740	676	25.37
1950	1171	8,280	Apr. 5, 1950	44	819	847	2.34	31.77	940	983	36.88
1951	1201	16,100	Nov. 26, 1950	66	1,068	1,056	2.92	39.61	1,127	1,129	42.34
1952	1231	27,000	June 1, 1952	51	1,208	1,173	3.24	44.11	1,032	969	36.43
1953	1271	11,300	Mar. 24, 1953	26	990	995	2.75	37.33	990	1,009	37.85
1954	1331	6,240	May 10, 1954	43	796	840	2.32	31.47	965	1,011	37.90
1955	1381	8,570	Aug. 19, 1955	47	1,032	990	2.73	37.16	1,215	1,148	43.04
1956	1431	18,100	Oct. 15, 1955	40	1,182	1,184	3.27	44.50	866	884	33.21
1957	1501	5,430	Jan. 23, 1957	29	630	609	1.68	22.85	636	657	24.64
1958	1551	7,820	Dec. 21, 1957	42	867	887	2.45	33.25	853	798	29.91
1959	1621	5,140	Jan. 22, 1959	38	714	702	1.94	26.34	884	961	36.02
1960	1701	12,800	Sept. 12, 1960	47	1,201	1,228	3.39	46.16	1,073	980	36.85
1961	1901	5,100	Apr. 23, 1961	55	781	758	2.09	28.43	702	697	26.14
1962	1901	7,820	Apr. 8, 1962	32	625	645	1.78	24.17	668	740	27.75
1963	1901	6,060	Apr. 3, 1963	36	739	712	1.97	26.69	686	687	25.76
1964	1901	5,820	Apr. 14, 1964	29	682	687	1.90	25.85	616	604	22.71
1965	1901	3,350	Apr. 16, 1965	28	455	447	1.23	16.75	528	567	21.27
1966 1967 1968 1969	* * *	3,350 6,120 6,540 12,900	Mar. 25, 1966 Apr. 3, 1967 Mar. 24, 1968 Apr. 23, 1969	50 74 51 62	725 824 779 1,096	718 852 776 1,075	1.98 2.35 2.14 2.97	26.92 31.95 29.16 40.33	773 821 801	708 865 806	26.54 32.43 30.33

a/ Adjusted for change in contents in Somerset and Harriman Reservoirs.

\* Published in annual data release, Water resources data for Massachusetts, New Hampshire, Rhode Island, and Vermont.

#### Table 2.--Discharge at continuous-record gaging stations--Continued

#### 38. North River at Shattuckville, Mass.

DRAINAGE AREA .-- 88.4 sq mi.

PERIOD OF RECORD. -- October 1939 to September 1969. Monthly discharge only for October, November 1939, published in WSP 1301.

GAGE.--Water-stage recorder. Datum of gage is 458.36 ft above mean sea level, datum of 1929.

AVERAGE DISCHARGE.--30 years (1939-69), 171 cfs (26.27 inches per year).

EXTREMES.--1939-69: Maximum discharge, 13,200 cfs Oct. 15, 1955 (gage height, 10.37 ft), from rating curve extended above 5,700 cfs on basis of computation of flow over dam at gage height 9.62 ft; minimum daily, 5.1 cfs Oct. 3, 1948.

REMARKS.--Diurnal fluctuation at times caused by mill above station; prior to 1950, greater regulation by mill.

Monthly and yearly mean discharge, in cubic feet per second

Water year	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	The year
1940	61.4	111	101	31.4	23.7	46.2	926	440	214	76.9	29.4	48.5	175
1941	20.6	131	182	132	216	120	291	92.5	50.9	24.8	13.4	20.9	107
1942	19.4	54.1	92.4	129	55.8	454	447	176	100	77.5	33.8	63.2	142
1943	81.5	310	215	104	158	387	518	526	146	59.1	69.5	34.9	217
1944	126	307	90.2	48.3	62.9	247	624	144	146	46.4	22.2	65.0	160
1945	41.2	61.9	141	147	109	684	426	541	250	178	75.2	47.2	226
1946	73.0	118	136	187	118	479	175	282	175	44.8	34.9	40.0	156
1947	55.8	41.2	51.3	117	146	242	794	361	146	96.4	57.8	51.5	179
1948	20.5	141	84.1	54.7	108	571	421	445	261	53.2	20.5	10.0	183
1949	12.6	55.3	299	321	210	303	328	137	33.4	17.6	18.5	25.2	147
1950	27.3	44.2	103	201	108	264	613	229	130	38.5	27.6	63.1	154
1951	36.3	186	279	182	266	415	606	147	124	129	80.3	88.7	211
1952	186	379	271	270	215	230	718	345	301	56.4	37.7	47.7	254
1953	26.6	69.8	225	208	244	866	467	377	47.7	21.9	17.0	9.00	215
1954	21.7	35.0	146	71.2	213	335	290	361	79.4	28.5	34.4	145	146
1955	74.9	384	294	93.8	101	285	662	144	68.9	28.2	228	49.0	201
1956	832	468	90.3	151	65.3	91.7	809	330	121	39.8	12.5	54.2	255
1957	35·3	119	167	151	144	217	246	153	51.6	23.6	13.8	14.3	111
1958	17·4	71.9	274	166	104	153	853	228	59.6	38.3	17.5	32.4	168
1959	55·9	107	83.3	136	89.2	184	665	148	49.7	35.8	28.0	17.6	133
1960	163	338	295	155	170	133	1,022	259	91.8	72.4	65.0	306	254
1961	98.3	136	78.5	48.0	139	317	705	307	80.8	45.0	28.3	34.9	168
1962	22.5	62.8	49.5	90.4	52.0	153	778	206	45.0	17.5	28.3	23.2	127
1963	82.2	159	186	80.1	64.7	248	517	214	70.5	23.1	16.2	13.9	140
1964	12.5	71.4	97.3	157	110	307	564	120	34.2	32.0	20.8	9.84	128
1965	11.8	25.4	67.2	36.3	81.9	112	438	104	28.4	18.1	16.7	25.6	79•
1966	62.9	83.0	101	84.1	122	294	316	181	61.3	24.8	13.0	36.5	115
1967	68.7	192	87.2	98.7	84.7	107	776	356	161	146	50.2	25.0	179
1968	84.8	104	232	92.7	95.8	471	264	190	378	83.4	20.0	37.2	171
1969	35.7	159	281	106	87.4	172	1,076	212	229	148	138	48.3	224

Monthly and yearly runoff, in inches

Water year	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	The year
1940	0.80	1.40	1.32	0.41	0.29	0.60	11.69	5.74	2.70	1.00	0.38	0.61	26.94
1941 1942 1943 1944 1945	.27 .25 1.06 1.65	1.65 .68 3.91 3.88 .78	2.38 1.21 2.80 1.18	1.72 1.69 1.36 .63 1.92	2.54 .66 1.86 .77 1.29	1.57 5.93 5.04 3.22 8.91	3.67 5.64 6.53 7.87 5.38	1.21 2.29 6.86 1.87 7.05	.64 1.26 1.84 1.84 3.16	.32 1.01 .77 .60 2.32	.17 .44 .91 .29	.26 .80 .44 .82	16.40 21.86 33.38 24.62 34.77
1946 1947 1948 1949	.95 .73 .27 .16 .36	1.49 .52 1.78 .70 .56	1.77 .67 1.10 3.90 1.34	2.44 1.53 .71 4.19 2.62	1.39 1.71 1.32 2.48 1.27	6.24 3.15 7.44 3.95 3.44	2.21 10.02 5.31 4.15 7.74	3.68 4.70 5.80 1.79 2.98	2.21 1.84 3.29 .42 1.64	.58 1.26 .69 .23	.46 .75 .27 .24	.50 .65 . .13 .32	23.92 27.53 28.11 22.53 23.61
1951 1952 1953 1954 1955	.47 2.42 .35 .28	2.35 4.79 .88 .44 4.85	3.64 3.53 2.94 1.91 3.84	2.37 3.52 2.72 .93 1.22	3.13 2.62 2.87 2.51 1.19	5.41 3.00 11.29 4.37 3.72	7.64 9.06 5.89 3.66 8.36	1.92 4.51 4.92 4.70 1.88	1.57 3.80 .60 1.00	1.69 •74 •29 •37 •37	1.05 .49 .22 .45 2.97	1.12 .60 .11 1.83 .62	32.36 39.08 33.08 22.45 30.87
1956 1957 1958 1959 1960	10.85 .46 .23 .73 2.13	5.91 1.50 .91 1.35 4.26	1.18 2.18 3.57 1.09 3.85	1.97 1.97 2.16 1.78 2.02	.80 1.69 1.23 1.05 2.08	1.20 2.82 2.00 2.40 1.74	10.21 3.10 10.77 8.40 12.89	4.31 1.99 2.97 1.93 3.37	1.53 .65 .75 .63 1.16	.52 .31 .50 .47	.16 .18 .23 .37	.68 .18 .41 .22 3.86	39.32 17.03 25.73 20.42 39.15

#### 38. North River at Shattuckville, Mass .-- Continued

#### Monthly and yearly runoff, in inches--Continued

Water year	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	The year
1961 1962 1963 1964 1965	1.28 .29 1.07 .16	1.72 .79 2.01 .90 .32	1.02 .65 2.43 1.27 .88	0.63 1.18 1.04 2.05	1.63 .61 .76 1.35	4.13 2.00 3.23 4.01 1.46	8.90 9.82 6.53 7.12 5.53	4.00 2.68 2.79 1.56 1.36	1.02 .57 .89 .43	0.59 .23 .30 .42 .24	0.37 .37 .21 .27	0.44 .29 .18 .12 .32	25.73 19.48 21.43 19.66 12.27
1966 1967 1968 1969	.82 .90 1.11 .47	1.05 2.42 1.31 2.00	1.31 1.14 3.02 3.66	1.10 1.29 1.21 1.39	1.43 1.00 1.17 1.03	3.84 1.39 6.14 2.24	3.99 9.80 3.34 13.6	2.36 4.64 2.48 2.77	.77 2.03 4.77 2.89	.32 1.91 1.09 1.93	.17 .65 .26 1.80	.46 .32 .47 .61	17.63 27.47 26.37 34.36

#### Yearly discharge, in cubic feet per second

			Wate	r year ending S	ept. 30			Calend	lar year
fear	WSP	Momente	ary maximum	Minimum	Mean	Per square	Runoff in	Mean	Runoff
		Discharge	Date			mile	inches		inches
1940	891	2,650	Apr. 12, 1940	-	175	1.98	26.94	180	27.72
1941	921	2,500	Feb. 8, 1941	6.0	107	1.21	16.40	92.8	14.24
1942	951	2,700	Mar. 22, 1942	8	142	1.61	21.86	179	27.49
1943	971	3,360	Apr. 28, 1943	6.8	217	2.45	33.38	210	32.32
1944	1001	4,150	Nov. 9, 1943	7.8	160	1.81	24.62	137	21.07
1945	1031, 1111	4,570	Apr. 26, 1945	15	226	2.56	34.77	233	35.82
1946	1051	2,130	Mar. 9, 1946	8.6	156	1.76	23.92	141	21.63
1947	1081	3,160	Apr. 12, 1947	14	179	2.02	27.53	187	28.76
1948	1111	4,520	Mar. 22, 1948	5.7	183	2.07	28.11	193	29.72
1949	1141	10,000	Dec. 31, 1948	5.1	147	1.66	22.53	130	20.03
1950	1171	2,520	Apr. 4, 1950	8.3	154	1.74	23.61	181	27.81
1951	1201	6,500	Mar. 31, 1951	17	211	2.39	32.36	239	36.64
1952	1231	5,980	June 1, 1952	14	254	2.87	39.08	211	32.51
1953	1271	6,500	Mar. 24, 1953	6.0	215	2.43	33.08	205	31.54
1954	1331	3,180	Sept. 11, 1954	7.4	146	1.65	22.45	192	29.49
1955	1381	4,660	Nov. 3, 1954	9.4	201	2.27	30.87	255	39.14
1956	1431	13,200	Oct. 15, 1955	10	255	2.88	39.32	166	25.52
1957	1501	2,380	Jan. 23, 1957	8.9	111	1.26	17.03	115	17.60
1958	1551	3,400	Dec. 21, 1957	8.6	168	1.90	25.73	157	24.19
1959	1621	2,960	Apr. 3, 1959	10	133	1.50	20.42	179	27.49
1960	1701	7,750	Sept. 20, 1960	18	254	2.87	39.15	214	32.95
1961	1901	3,090	Apr. 23, 1961	12	168	1.90	25.73	153	23.44
1962	1901	3,990	Apr. 8, 1962	8.6	127	1.44	19.48	151	23.25
1963	1901	3,670	Dec. 6, 1962	7.0	140	1.58	21.43	119	18.26
1964	1901	3,160	Apr. 14, 1964	6.8	128	1.44	19.66	121	18.68
1965	1901	1,690	Apr. 16, 1965	7.6	79.9	.90	12.27	91.8	14.10
1966	*	1,610	Mar. 25, 1966	7.1	115	1.30	17.63	123	18.90
1967	*	2,700	Apr. 3, 1967	15	179	2.02	27.47	185	28.46
1968	*	5,040	Apr. 25, 1968	11	171	1.94	26.37	176	27.06
1969	*	9,100	Apr. 23, 1969	14	224	2.53	34.36		_

<sup>\*</sup> Published in annual data release, Water resources data for Massachusetts, New Hampshire, Rhode Island, and Vermont.

45. South River near Conway, Mass.

DRAINAGE AREA .-- 24.0 sq m1.

PERIOD OF RECORD.--June 1966 to September 1969.

GAGE.--Water-stage recorder. Altitude of gage is 460 ft (from topographic map).

EXTREMES.--1966-69: Maximum discharge, 3,000 cfs Apr. 23, 1969 (gage height, 7.40 ft), from rating curve extended above 390 cfs; minimum, 3.0 cfs Aug. 21, 22, Sept. 2, 3, 1966.

Monthly and yearly mean discharge, in cubic feet per second

Water	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	The year
1966 1967 1968 1969	17.1 18.7 10.3	40.8 20.6 36.5	22.5 51.9 70.3	25.8 26.1 28.8	23.0 26.0 23.9	32·3 118 53·1	172 65.9 212	76.5 53.9 43.1	45.3 117 26.7	10.7 27.3 29.2 22.5	4.97 8.83 6.67 28.9	9.59 5.43 17.4 25.6	41.2 45.9 48.4

#### 45. South River near Conway, Mass.--Continued

#### Monthly and yearly runoff, in inches

Water	ост	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	The year
1966 1967 1968 1969	- 0.82 .90 .50	1.90 .96 1.70	1.08 2.49 3.37	1.24 1.25 1.38	1.00 1.17 1.04	1.55 5.67 2.55	7.97 3.06 9.87	3.67 2.59 2.07	2.11 5.42 1.24	0.52 1.31 1.40 1.08	0.24 .42 .32 1.39	0.45 .25 .81 1.19	23.33 26.05 27.38

#### Yearly discharge, in cubic feet per second

	Annual		Water	year ending Se	pt. 30			Caler	ndar year
Year	data release*	Momentary maximum		Minimum	Mean	Per square	Runoff	Mean	Runoff
	release*	Discharge	Date	day	rican	mile	inches	rican	inches
1967	1967	695	Nov. 3, 1966	3.5	41.2	1.72	23.33	42.2	23.89
1968 1969	1968 1969	1,790 3,000	Apr. 25, 1968 Apr. 23, 1969	4.1 5.8	45.9 48.4	1.91 2.02	26.05 27.38	48.1	27.27

<sup>\*</sup> Water resources data for Massachusetts, New Hampshire, Rhode Island, and Vermont.

#### 46. Deerfield River near West Deerfield, Mass.

DRAINAGE AREA.--558 sq mi. Prior to December 1905, 562 sq mi (revised).

PERIOD OF RECORD. -- March to November 1904, January 1905, March to December 1905, October 1940 to September 1969. Published as "at Deerfield" 1904-5.

GAGE.--Water-stage recorder. Altitude of gage is 155 ft (from topographic map). Prior to Dec. 16, 1905, nonrecording gage at site 1.5 miles downstream at different datum.

AVERAGE DISCHARGE.--29 years (1940-69), 1,225 cfs (29.81 inches per year), adjusted for storage.

EXTREMES.--1940-69: Maximum discharge, 48,500 cfs Dec. 31, 1948 (gage height, 15.43 ft); minimum daily, 28 cfs July 29, 1962.

REMARKS.--Flow regulated since 1913 by Somerset Reservoir, since 1924 by Harriman Reservoir, and by several powerplants above station.

#### Monthly and yearly mean discharge, in cubic feet per second (observed)

Water year	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	The year
1904 1905	983	336	1	-	-	-	4,050 3,380	2,270 716	1,200 682	411 421	476 588	915 2,110	-
1906	630	696	-	-	-	*	-	-	-	-	-	-	-
1941	451	998	1,461	1,301	1,739	1,361	1,783	516	316	209	370	382	901
1942	248	437	947	1,241	1,127	2,200	3,068	1,109	597	566	342	552	1,034
1943	673	1,919	1,571	1,261	1,508	2,397	2,772	3,945	1,105	479	503	516	1,554
1944	756	1,896	1,226	961	693	1,140	3,240	937	998	369	441	605	1,101
1945	456	944	1,256	1,103	1,354	3,531	2,683	3,125	1,850	1,369	688	482	1,573
1946	705	1,116	1,187	1,534	1,289	2,469	1,041	1,953	1,397	531	356	531	1,177
1947	467	440	699	1,144	1,341	2,064	4,425	2,657	981	682	531	599	1,333
1948	614	777	602	895	876	3,487	2,668	2,880	1,723	553	368	474	1,328
1949	255	370	2,145	2,718	1,535	2,235	1,685	811	484	170	233	369	1,084
1950	507	759	775	1,427	1,114	1,593	3,452	1,460	1,020	362	430	621	1,123
1951	510	1,489	1,947	1,383	1,875	2,725	3,615	946	781	843	602	822	1,456
1952	1,355	2,400	1,830	1,896	1,731	2,150	3,833	2,152	2,129	655	432	518	1,752
1953	441	555	1,495	1,432	1,823	4,771	2,791	2,801	538	291	354	94.5	1,451
1954	376	477	1,321	973	1,509	2,004	1,890	2,376	756	302	445	1,082	1,124
1955	778	2,668	2,121	1,440	1,317	2,043	3,655	877	572	322	1,522	675	1,496
1956	4,632	3,302	1,303	1,372	924	1,174	3,625	2,460	1,039	370	324	660	1,766
1957	592	981	1,318	1,341	1,328	1,675	1,239	768	329	268	388	405	884
1958	411	907	1,661	1,417	1,367	1,336	4,351	1,635	501	361	450	454	1,233
1959	582	1,001	1,088	1,328	1,309	1,510	2,965	892	380	479	422	335	1,020
1960	1,203	2,496	2,186	1,587	1,724	1,774	4,937	1,326	999	503	591	1,622	1,737
1961	1,008	1,177	1,034	684	1,061	1,933	3,177	1,908	517	303	457	431	1,139
1962	455	525	927	1,040	757	1,083	3,691	1,224	421	119	195	319	894
1963	466	1,011	1,459	1,061	981	1,852	2,992	1,292	443	327	240	373	1,040
1964	350	607	1,007	1,311	1,335	2,402	2,885	575	307	433	167	175	960
1965	326	244	385	622	928	1,097	2,086	541	473	357	299	237	629
1966	504	633	970	1,218	1,367	2,179	1,814	862	571	465	342	714	967
1967	716	1,248	938	942	1,175	1,134	3,382	2,009	1,219	808	527	505	1,213
1968	618	892	1,415	1,289	1,159	2,175	1,327	1,383	1,999	632	462	334	1,140
1969	370	958	1,986	1,306	1,198	1,338	4,877	1,533	1,325	812	1,248	595	1,459

46. Deerfield River near West Deerfield, Mass.--Continued

Monthly and yearly runoff, in inches (adjusted) A

Water year	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	The year
1904 1905	2.02	0.67	-	-	-	-	8.04 6.70	4.66 1.46	2.39	0.84	0.98 1.21	1.82	-
1906	1.29	1.38	-	-	-	-	-	-	-	-	-	•	ade .
1941 1942 1943 1944 1945	.40 .98 1.21 1.58	2.48 1.50 4.02 4.00 1.10	3.12 1.76 2.51 1.16 2.09	1.55 2.14 1.40 .78 2.06	2.20 .85 1.99 .80 1.57	1.38 5.48 4.88 3.37 9.95	5.51 8.00 7.31 8.55 6.04	1.47 2.95 9.47 2.40 6.50	.91 1.15 2.08 2.39 3.58	.66 1.13 .69 .70 2.73	.36 .57 .94 .30	.57 1.00 .34 1.11 .87	20.61 27.51 36.84 27.14 38.26
1946 1947 1948 1949 1950	1.60 1.33 .29 .26	2.40 .91 2.04 1.33 .83	1.64 1.17 1.13 5.39 2.21	2.64 2.01 .99 4.72 3.91	1.44 1.88 1.47 2.63 1.48	6.90 3.52 9.26 4.56 3.19	2.27 10.91 6.01 4.19 8.22	4.51 6.23 6.08 2.02 3.18	2.54 2.10 3.51 .43 1.84	.71 1.41 .85 .29	.61 .80 .31 .24 .68	.68 .40 .12 .57	27.94 32.67 32.06 26.63 28.02
1951 1952 1953 1954 1955	.76 2.96 .28 .43 1.40	3.68 4.93 1.12 .70 5.62	3.45 3.66 3.20 3.16 4.19	2.60 3.97 3.02 1.26 1.51	3.30 2.57 3.02 2.87 1.61	5.01 2.70 11.50 4.67 4.12	8.88 10.37 6.19 5.19 9.96	2.13 4.85 5.76 5.25 1.89	1.52 4.02 .74 1.28 .85	1.61 .65 .24 .39	1.14 .55 .25 .69 3.22	1.05 .65 .11 2.48 .72	35.13 41.88 35.43 28.37 35.39
1956 1957 1958 1959 1960	10.84 .59 .36 1.07 3.58	6.08 2.08 1.64 1.84 5.42	1.21 2.87 4.73 1.35 3.94	2.47 2.50 1.90 2.81 2.45	1.01 1.68 1.17 1.27 2.43	1.50 2.73 1.81 2.60 2.33	9.85 4.05 12.30 9.13 13.14	6.58 2.47 3.96 2.08 3.02	1.88 .88 .80 .95 1.41	.69 .67 .74 .57	.19 .17 .37 .51	.83 .30 .68 .36 3.63	43.13 20.99 30.46 24.54 43.04
1961 1962 1963 1964 1965	1.45 .30 1.38 .20	1.98 1.04 2.04 2.22 .42	1.17 1.01 2.30 2.00 1.36	.63 1.69 .97 2.18 .77	1.88 .78 .74 1.25 1.18	4.01 2.08 3.34 4.73 1.20	8.49 10.92 8.58 8.51 6.25	4.87 2.93 3.66 1.47 1.90	1.10 •57 •87 •36 •51	.61 .20 .24 .30	.52 .35 .28 .27	.45 .34 .23 .07 .75	27.16 22.21 24.63 23.56 15.10
1966 1967 1968 1969	1.84 1.51 1.37 .52	1.85 2.66 1.53 2.66	1.77 1.47 3.20 3.92	1.43 1.62 1.17 1.31	1.54 1.11 1.16 1.02	3.75 1.68 6.71 2.07	5.58 10.00 4.08 14.08	3.07 4.95 2.77 3.03	1.04 2.21 4.06 2.53	.40 1.68 .95 1.68	.23 .90 .18 1.55	.88 .40 .57	23.38 30.19 27.75 34.99

a/ Adjusted for change in contents in Somerset and Harriman Reservoirs since October 1940.

Yearly discharge, in cubic feet per second

			¥	ater year en	ding Sept.	30				Calendar y	ear
Year	WSP		Observed				Adjusted <u>a</u> /		Observed	Adju	sted <u>a</u> /
1001	WOI		ary maximum Date	Minimum	Mean	Mean	Per square	Runoff	Mean	Mean	Runoff
		Discharge	Date		1	I	mile	inches			inches
1904 1905	415 415	-	•	-	-	-		-	100 400	-	-
1906	415	-	-	•	-	-		-	~	-	-
1941 1942 1943 1944 1945	921 951 971 1001 1031	10,000 10,700 15,700 20,100 21,300	Feb. 8, 1941 Mar. 9, 1942 May 13, 1943 Nov. 9, 1943 Apr. 26, 1945	57 59 98 80 80	901 1,034 1,554 1,101 1,573	847 1,131 1,515 1,114 1,573	1.52 2.03 2.72 2.00 2.82	20.61 27.51 36.84 27.14 38.26	794 1,245 1,530 1,000 1,602	775 1,275 1,474 1,005 1,636	18.85 31.01 35.84 24.51 39.79
1946 1947 1948 1949	1051 1081 1111 1141 1171	10,800 17,500 21,100 48,500 12,500	May 28, 1946 Apr. 12, 1947 Mar. 22, 1948 Dec. 31, 1948 Apr. 5, 1950	74 46 69 48 50	1,177 1,333 1,328 1,084 1,123	1,148 1,343 1,314 1,095 1,151	2.06 2.41 2.35 1.96 2.06	27.94 32.67 32.06 26.63 28.02	1,059 1,365 1,395 1,021 1,283	1,057 1,346 1,458 958 1,326	25.71 32.72 35.58 23.29 32.27
1951 1952 1953 1954 1955	1201 1231 1271 1331 1381	24,400 34,800 22,200 13,400 18,600	Nov. 26, 1950 June 1, 1952 Mar. 24, 1953 Sept. 11, 1954 Aug. 19, 1955	50 72 50 46 65	1,456 1,752 1,451 1,124 1,496	1,444 1,717 1,456 1,167 1,455	2.59 3.08 2.61 2.09 2.61	35.13 41.88 35.43 28.37 35.39	1,593 1,495 1,424 1,406 1,806	1,594 1,433 1,443 1,451 1,739	38.79 34.93 35.12 35.29 42.31
1956 1957 1958 1959 1960	1431 1501 1551 1621 1701	43,700 9,570 13,800 11,100 24,700	Oct. 15, 1955 Jan. 23, 1957 Dec. 21, 1957 Apr. 3, 1959 Sept. 12, 1960	56 50 59 56 75	1,766 884 1,233 1,020 1,737	1,767 863 1,253 1,009 1,764	3.17 1.55 2.25 1.81 3.16	43.13 20.99 30.46 24.54 43.04	1,235 892 1,206 1,289 1,515	1,252 912 1,151 1,365 1,423	30.54 22.18 27.99 33.22 34.70

#### 46. Deerfield River near West Deerfield, Mass.--Continued

#### Yearly discharge, in cubic feet per second--Continued

					W	ater year end	ding Sept.	30				Calendar y	ear
Year	WSP			Obs	erved				Adjusted Adjusted Adjusted		Observed	Adju	sted_a/
		Momenta	ary maxi	mum		Minimum	Mean	Mean	Per square	Runoff	Mean	Mean	Runoff
		Discharge		Date		day			mile	inches			inches
1961	1901	9,940	Apr.	23,	1961	45	1,139	1,117	2.00	27.16	1,030	1,024	24.91
1962	1901	14,200	Apr.	8,	1962	28	894	913	1.64	22.21	980	1,052	25.58
1963	1901	10,400	Apr.	3,	1963	44	1,040	1,013	1.82	24.63	959	960	23.33
1964	1901	10,100	Apr.	14,	1964	44	960	966	1.73	23.56	876	864	21.07
1965	1901	6,210	Apr.	16,	1965	46	629	621	1.11	15.10	726	765	18.63
1966	*	7,520	Mar.	25,	1966	42	967	961	1.72	23.38	1,033	968	23.56
1967	*	11,500	Apr.	3,	1967	90	1,213	1,241	2.22	30.19	1,216	1,260	30.65
1968	*	14,700	Apr.	25,	1968	51	1,140	1,137	2.04	27.75	1,173	1,178	28.75
1969	*	16,900	Apr.	23,	1969	74	1,459	1,438	2.58	34.99		_	

#### 50. Green River near Colrain, Mass.

DRAINAGE AREA .-- 41.4 sq mi.

PERIOD OF RECORD. -- October 1967 to September 1969.

GAGE. -- Water-stage recorder. Altitude of gage is 435 ft (from topographic map).

EXTREMES.--1967-69: Maximum discharge, 2,210 cfs Apr. 23, 1969 (gage height, 7.20 ft), from rating curve extended above 410 cfs; minimum, 1.9 cfs Aug. 1, 1968.

#### Monthly and yearly mean discharge, in cubic feet per second

Water year	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	The year
1968	42.5	57.9	95.1	43.8	40.4	199	118	91.7	141	45.7	9.62	15.9	75.2
1969	14.6	67.0	123	50.3	41.8	75.6	388	105	115	81.4	80.4	25.0	97.2

#### Monthly and yearly runoff, in inches

Water year	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	The year
1968 1969	1.18 .41	1.56	2.65 3.44	1.22	1.05	5.54 2.10	3.19 10.5	2.55 2.91	3.80 3.10	1.27	0.27	0.43	24.72 31.86

#### Yearly discharge, in cubic feet per second

	Annual		Water	year ending S	ept. 30			Calen	dar year
Year	data release*	Moment	ary maximum	Minimum	Mean	Per square	Runoff	Mean	Runoff
		Discharge	Date	day		mile	inches		inches
1968 1969	1968 1969	1,460 2,210	Apr. 25, 1968 Apr. 23, 1969	4.1 6.5	75.2 97.2	1.82 2.35	24.72 31.86	76.0	24.97

<sup>\*</sup> Water resources data for Massachusetts, New Hampshire, Rhode Island, and Vermont.

Adjusted for change in contents in Somerset and Harriman Reservoirs since October 1940.

Published in annual data release, Water resources data for Massachusetts, New Hampshire, Rhode Island, and Vermont.

Table 3.--Discharge at low-flow stations

Map		Drainage	Measu	rements
reference number (Plate 1)	Station name	area (sq mi)	Date	Discharge (cfs)
2	Dunbar Brook near Monroe Bridge, Mass	7.01	9- 7-67 10- 9-67 8- 7-68 9-18-68 9-24-68 8-25-69 9-15-69	4.11 3.68 2.20 1.40 .92 3.28 2.78
14	Fife Brook near Hoosac Tunnel, Mass	2.11	9- 7-67 10- 9-67 8- 7-68 9-18-68 9-24-68 8-25-69 9-15-69	1.60 1.05 1.21 .68 .63 2.12 1.24
6	Potter Brook near Rowe, Mass	1.57	9- 7-67 8- 7-68 9-18-68 9-24-68 8-25-69 9-16-69	.20 .09 .09 .05 .11
7	Pelham Brook at Rowe, Mass	7.19	9- 7-67 10-16-67 8- 7-68 9-18-68 9-24-68 8-25-69 9-16-69	1.16 2.25 .73 1.24 .65 .96
8	Pelham Brook at Zoar, Mass	13.5	9- 7-67 10-16-67 8- 7-68 9-18-68 9-24-68 8-25-69 9-16-69	2.87 4.85 2.50 2.86 1.94 2.98 3.46
9	Cold River at Florida, Mass	6.48	9- 8-67 8- 7-68 9-18-68 9-24-68 8-27-69 9-15-69	1.27 .34 .44 .20 .64 1.01
10	Black Brook near Drury, Mass	3.82	9- 7-67 8- 7-68 9-18-68 9-24-68 8-27-69 9-16-69	•53 •46 •56 •30 •92 1•26
11	Cold River near Zoar, Mass	29.6	9- 9-67 8- 7-68 9-18-68 9-24-68 8-27-69 9-16-69	5.56 4.30 4.23 2.60 6.38 8.42

Table 3.--Discharge at low-flow stations--Continued

Map reference		Drainage	Measu	rements
number (Plate 1)	Station name	area (sq mi)	Date	Discharge (cfs)
12	Chickley River at West Hawley, Mass	8.71	9- 7-67 8- 7-68 9-18-68 9-24-68 8-27-69 9-16-69	3.05 3.09 2.15 1.82 3.81 5.15
13	King Brook at West Hawley, Mass	5.22	9- 7-67 8- 7-68 9-18-68 9-24-68 8-29-69 9-16-69	1.30 .75 1.17 .66 1.18 2.23
14	Mill Brook (tributary to Chickley River) near West Hawley, Mass	6.28	9- 7-67 8- 7-68 9-18-68 9-24-68 8-27-69 9-16-69	1.51 2.39 1.55 1.47 2.08 3.15
15	Chickley River near Charlemont, Mass	27.1	9- 7-67 8- 7-68 9-18-68 9-24-68 8-27-69 9-16-69	6.95 8.06 6.88 5.07 10.9
ię	Legate Hill Brook near Charlemont, Mass	2.62	9- 7-67 10- 9-67 10-16-67 8- 7-68 9-18-68 9-24-68 8-26-69 9-15-69	.27 .35 .52 .50 .27 .14 .29
18	Bozrah Brook at Charlemont, Mass	3.84	9- 7-67 8- 7-68 9-18-68 9-24-68 8-26-69 9-16-69	.45 .80 .62 .48 .80
19	Mill Brook (tributary to Deerfield River) near Charlemont, Mass	7.78	9- 6-67 10- 9-67 10-16-67 8- 7-68 9-18-68 9-24-68 8-26-69 9-16-69	2.47 2.20 2.70 3.23 1.97 1.77 2.68 2.97
20	Maxwell Brook near Charlemont, Mass	2.94	9- 6-67 10- 9-67 10-16-67 8- 7-68 9-18-68 9-24-68 8-26-69 9-16-69	.64 .70 .81 .94 .55 .48 .85

Table 3.--Discharge at low-flow stations--Continued

Map reference		Drainage	Measu	rements
number (Plate 1)	Station name	area (sq mi)	Date	Discharge (cfs)
23	Avery Brook near Charlemont, Mass	3.88	9- 6-67 10-18-67 8- 8-68 9-19-68 9-24-68 8-26-69 9-16-69	1.59 1.56 2.79 1.53 1.39 2.11 2.38
24	Clesson Brook near Buckland, Mass	7.48	9- 7-67 8- 8-68 8-20-68 9-19-68 9-25-68 8-26-69 9-17-69	2.65 4.16 2.72 2.48 2.29 3.55 3.77
25	Upper Branch Clesson Brook near Buckland, Mass.	5.77	9- 7-67 8- 8-68 8-20-68 9-19-68 9-25-68 8-26-69 9-17-69	1.75 3.52 2.15 2.07 1.94 2.64 2.91
26	Clesson Brook near Shelburne Falls, Mass	18.2	9- 6-67 8- 8-68 9-19-68 9-25-68 8-26-69 9-17-69	5.99 10.8 6.78 6.01 9.38 10.6
27	Clark Brook near Shelburne Falls, Mass	2.78	9- 6-67 8- 8-68 9-19-68 9-24-68 8-26-69 9-17-69	.31 .76 .54 .40 .50
32	Foundry Brook at Lyonsville, Mass	2.13	9- 6-67 10-17-67 8- 8-68 8-20-68 9-19-68 9-25-68 8-27-69 9-17-69	.62 .78 .93 .66 .62 .52 .99
34	West Branch Brook at North Heath, Mass	6.90	9- 6-67 10-18-67 8- 8-68 9-19-68 9-25-68 8-26-69 9-17-69	1.00 2.36 .62 .87 .61 1.44 1.17

Table 3.--Discharge at low-flow stations

Map reference		Drainage	Measu	rements
number (Plate 1)	Station name	area (sq mi)	Date	Discharge (cfs)
35	Sanders Brook near North Heath, Mass	4.00	9- 6-67 10-17-67 8- 8-68 8-20-68 9-19-68 9-25-68 8-26-69 9-16-69	1.33 1.26 1.57 1.00 .99 .86 1.72 1.30
36	Taylor Brook near Lyonsville, Mass	5.20	9- 6-67 10-17-67 8- 8-68 8-20-68 9-19-68 9-25-68 8-26-69 9-16-69	1.22 1.48 1.72 1.06 1.18 .97 2.01 2.47
37	West Branch North River at Lyonsville, Mass	29.8	9- 6-67 10-17-67 8- 8-68 8-20-68 9-19-68 9-25-68 8-27-69 9-16-69	7.81 11.0 8.98 5.70 6.52 7.04 12.4
41	Bear River near Conway, Mass	10.5	9- 6-67 10-18-67 8- 8-68 8-20-68 9-19-68 9-25-68 8-26-69 9-22-69	2.18 2.18 3.09 1.25 1.93 1.32 2.54 3.27
42	Dragon Brook at Shelburne, Mass	3.57	9- 6-67 10-18-67 8- 9-68 8-20-68 9-19-68 9-25-68 8-26-69 9-22-69	.51 .73 .75 .46 .85 .67 1.13
43	Creamery Brook at South Ashfield, Mass	3.65	9- 7-67 8- 8-68 8-20-68 9-19-68 9-25-68 8-25-69 10- 1-69	.66 1.00 .63 .84 .66 1.20
1+1+	Poland Brook near Conway, Mass	4.03	9- 7-67 8- 8-68 8-20-68 9-19-68 9-25-68 8-25-69 10- 1-69	.60 .98 .53 .83 .61 1.46

Table 3.--Discharge at low-flow stations--Continued

Map		Drainage	Measu	rements
reference number (Plate 1)	Station name	area (sq mi)	Date	Discharge (cfs)
48	Green River near Leyden, Mass	35.0	9- 6-67 10-17-67 8- 9-68 8-20-68 9-20-68 8-29-69	9.56 14.4 11.1 7.60 8.24 18.4
51	Stafford Brook near Colrain, Mass	2.39	9- 6-67 10-17-67 8- 9-68 8-20-68 9-20-68 8-29-69	.45 .69 .64 .39 .43
52	Green River near Greenfield, Mass	50.8	9- 6-67 10-17-67 8- 9-68 8-20-68 9-19-68 9-25-68 8-27-69 9-17-69	13.5 18.7 15.8 10.9 10.3 9.20 27.0 21.7
54	Glen Brook near Leyden, Mass	2.32	9- 6-67 10-16-67 8- 8-68 8-20-68 9-20-68 9-25-68 8-27-69 9-17-69	.13 .60 .24 .05 .16 .08 .46
55	Punch Brook near Greenfield, Mass	6.35	9- 6-67 10-17-67 8- 9-68 8-20-68 9-19-68 9-25-68 8-27-69 9-17-69	1.04 1.43 1.64 .94 .97 .74 2.04 2.89
56	Mill Brook (tributary to Green River) near Bernardston, Mass		7- 7-69 7-16-69 8-27-69 9-17-69	1.18 *.94 1.04 1.36
57	Mill Brook (tributary to Green River) near Greenfield, Mass	4.38	10-17-67 8- 8-68 8-20-68 9-20-68 9-25-68 7- 7-69 7-16-69 8-27-69	.38 .62 .40 .16 .14 1.15 *.71

<sup>\*</sup> Not a base-flow measurement.

	Table 4Monthly chemical analyses of streams																					
Date	Discharge (cfs)	Silica (S10 <sub>2</sub> )	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potessium (K)	Bicarbonate (HCO3)	Carbonate (CO3)	Sulfate (SO <sub>4</sub> )	Chloride (Cl)	Fluoride (F)	Nitrate (NO3)	Dissolved solids (residue at 180°C)	Dissolved solids (sum of constituents)	Hardness (Ca, Mg)	Noncarbonate hardness	Specific conductance (micromhos)	Hd	Color	Temperature (°C)
							21	. Dee:	rfield	River	at Ch	arlemon	nt, Ma	ss.								
4-26-67 5-24-67 6-27-67 7-31-67 8-24-67 9-27-67 10-31-67 11-29-67 12-26-67 1-24-68 2-26-68 3-20-68 4-26-68 5-28-68	1780 1200 1240 1040 90 339 140 1050 1150 1050 714 2550 1860 1050	3.4 3.6 3.6 3.7 4.2 3.8 4.0 4.1 4.3 3.5 3.6	0.07 .08 .14 .15 .14 .00 .15 .24 .40 .17	0.08 .05 .08 .07 .02 .08 .06 .06 .02 .08 .07 .12	3.2 3.1 4.4 3.3 4.3 3.3 3.5 3.5 3.7 3.3	0.3 .6 .5 .4 .96 .96 .7 .78 .6 .5 .6	2.5 2.6 2.0 2.9 2.7 2.4 2.7 2.4 2.9 2.5 2.5 4	0.3 .5 .5 .6 .6 .5 .5 .6 .7 .8	4 4 6 6 10 5 8 6 5 6 8 6 5 6 5 6 5 6 5 6 5 7	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	9.3 8.7 8.8 6.7 7.9 8.7 9.3 7.5 8.0 8.0 7.8 8.6	4.2 3.0 3.1 3.8 5.0 5.2 4.7 5.3 4.3 3.9 5.0 4.0	0.2 .1 1.0 .1 .1 .2 .1 .1 .1 .1	0.5 .7 .3 .3 .3 1.3 .4 .5 .6 .8 .9	25 37 33 27 32 31 35 29 26 29 30 36 28 30	30 29 27 27 29 28 27 25	9 10 13 10 14 10 11 11 12 12 10 11	6 7 8 4 6 6 7 5 7 6 6 6 6 6 6	43 42 69 41 52 47 48 45 42 42 43 41 42	6.2 6.4 6.1 6.7 6.8 6.3 6.4 6.3 6.5 6.1	9 4 11 4 5 5 5 5 5 5 12 3 14 3	9 14 21 23 20 18 9 5 4 2 6 5 7
4-26-67	201	F 1	0)1	٥٢	0 0	4	38				Shattu				50		22	6	76	7.0	8	0
5-24-67 5-24-67 6-27-67 7-31-67 8-24-67 9-27-67 10-31-67 11-29-67 12-26-67 1-23-68 2-26-68 3-20-68 4-26-68 5-28-68	394 143 171 79 35 20 76 103 173 84 56 1160 474	5.1 5.3 5.8 12 5.8 6.4 6.1 5.9 6.7 6.2 4.7 4.8	.04 .09 .14 .09 .31 .18 .16 .16 .15 .12	.05 .02 .09 .03 .04 .08 .06 .06 .00	8.0 9.6 10 13 12 14 8.8 9.4 9.0 11 11 5.5 6.6	.6 1.0 .9 1.1 1.3 1.6 1.2 1.1 1.2 1.4 .7	12 6.0 4.7 56 48 24 15 3.2 9.0 6.0 2.4 2.8 6.7	1.9 1.0 2.3 2.8 3.5 1.6 2.1 1.4 2.4 2.4 1.0	21 43 30 40 169 135 76 48 21 41 36 14 16 30	0 0 0 0 0 0 0 0 0 0 0 0 0	7.6 12 12 9.1 14 15 11 13 13 11 10 8.2 10	5.8 5.4 5.2 6.9 8.1 13 9.3 6.9 8.0 3.7 4.5	.1 .2 .1 .2 .3 .1 .2 .1 .1 .1	.2 .1 .2 .3 .1 .1 .2 .0 .1	52 81 60 65 187 168 112 80 50 62 65 44 41 58	99 80 51 68 64 33 38 60	22 28 28 37 36 42 27 28 27 32 34 16 20 32	6 0 4 4 0 0 0 0 10 0 4 5 6 8	76 118 90 106 313 299 171 139 84 114 110 56 63 110	7.2 7.0 6.9 6.6 7.6 7.7 7.1 6.8 6.7 6.9 6.6 7.0	8 10 40 12 8 9 2 5 1 16 4	9 14 18 22 17 17 1 1 1 1 1 1 1 1
								45.		River	near C		Mass.									
4-26-67 5-24-67 6-27-67 7-31-67 8-24-67 9-27-67 10-31-67 11-29-67 12-26-67 1-23-68 2-26-68 3-20-68 4-26-68 5-28-68	87 38 41 17 8. 5, 17 18 36 24 15 280 89 25	5.8 5.5 6.7 6.2 5.6 3 4.6 7.2 6.6 6.6 7.0 6.9 4.7 5.9	.03 .06 .15 .05 .12 .08 .02 .11 .10 .08 .34	.04 .03 .12 .02 .08 .06 .06 .00 .03 .05 .02	14 15 19 22 21 22 21 18 15 17 18 10 14 18	.7 1.1 1.2 1.3 1.6 1.6 1.3 1.1 1.2 1.4 .9	3.6 3.9 4.5 5.0 5.6 5.9 4.8 3.7 5.6 2.7 3.8 4.6	.9 1.1 1.4 1.7 2.0 2.2 1.7 1.4 1.1 1.2 1.4	32 39 52 56 61 62 51 44 36 41 49 24 32 42	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	11 11 9.7 10 12 15 14 12 11 12 8.6 11	7.6 8.0 9.0 11 12 13 11 10 8.9 8.5 10 6.2 8.0 8.4	.1 .2 .1 .2 .2 .2 .1 .0 .1	1.0 .5 1.2 .7 .5 .3 .8 1.9 .9 1.1 1.6 .8 2.2	73 72 80 84 100 95 101 76 70 68 81 60 67 74	88 80 68 71 81 47 63 70	38 42 52 60 59 62 59 50 42 48 51 28 39	12 10 10 14 9 10 17 14 12 14 11 9 13 16	103 116 133 150 169 149 140 113 121 132 81 106 128	7.3 7.0 6.9 7.0 7.3 7.0 7.4 7.2 6.9 7.0 7.0 7.0	5 3 4 6 4 3 4 3 0 3 1 4 9 3	11 15 20 24 16 -14 3 0 0 0 0 0
							46. D	eerfie	ld Riv	er ne	ır West	Deerf	ield, 1	Mass.								
4-26-67 5-24-67 6-27-67 7-31-67 8-24-67 9-27-67 10-31-67 11-29-67 12-26-67 1-23-68 2-26-68 3-20-68 4-26-68 5-28-68	2100 1720 1130 1390 985 1000 342 1030 1270 1500 1050 3790 3050 1720	4.3 3.9 4.8 3.4 3.8 4.2 5.1 4.8 4.0 3.8	.05 .15 .13 .18 .04 .21 .29 .11 .11 .20 .24 .57	.04 .05 .21 .07 .06 .09 .07 .00 .05 .07	6.3 5.3 7.9 7.1 5.6 6.2 6.6 5.8 5.8 5.3 4.8 5.2	.4 .8 .8 .8 .7 1.1 .7 .9 .8 .7 .8	2.9 3.1 2.7 3.4 4.0 3.5 3.3 2.4 2.9 6.2 2.5 8 2.9	.4 .7 .7 .7 .7 .7 .1.0 .7 .8 .6 .7 .8 .8	14 12 19 20 17 11 14 12 12 10 20 10 12 10	0 0 0 0 0 0 0 0 0 0 0	10 9.5 10 8.1 7.9 9.3 7.9 9.7 8.2 9.0 8.6 9.0 7.5	4.4 4.4 3.9 5.1 5.7 5.5 5.5 5.0 4.8 4.0 4.0	.1 .1 .2 .1 .1 .1 .0 .1 .1	.6 .2 .3 .6 .2 1.6 1.7 .4 .5 1.0	47 42 46 41 348 42 43 47 37 34	39 39 38 33 43 33 32 31	17 16 22 20 17 14 20 18 20 16 18 16 15 16	6 6 7 4 3 6 8 8 10 8 2 8 5 8	61 57 66 68 63 59 64 59 64 71 55 54 75	7.0 6.6 6.6 6.7 6.5 6.8 6.6 6.7 6.6 6.7 6.5 6.7	7 7 5 11 7 0 3 5 3 4 9 2 17 3	7 15 21 23 21 14 5 3 1 4 1 4 8
11-29-67 12-26-67 1-24-68 2-26-68 3-20-68 4-26-68 5-28-68 7-10-68 7-26-68 9-06-68 10-23-68 11-22-68	54 98 56 62 258 47 40 22 5.11 58	5.8 5.6 6.1 4.3 4.8 5.6 5.8 5.8 6.3 5.8	.09 .05 .11 .04 .49 .13 .05 .06 .05 .00	.05 .03 .01 .05 .03 .05 .01 .00 .00	13 12 14 16 7.0 8.9 14 17 19 20 18	1.3 1.2 1.4 1.6 .8 .9 1.3 1.5 1.6 1.7	1.7 1.7 1.5 1.8 1.5 1.8 1.7 1.8 2.0 2.1 2.0	.7 .7 .7 .7 .7 .8 .9 .9 1.2 1.4	34 32 39 42 18 20 40 51 58 62 54 39	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	11 9.7 11 11 8.2 10 11 10 9.2 10 11 12	4.0 3.5 2.7 3.0 2.8 2.4 1.8 2.2 2.1 6.0 4.0	.1 .0 .1 .1 .1 .1 .0 .0	.4 .3 .4 .4 .2 .1 .0 .0	56 49 58 70 44 43 50 75 74 73 72 63	55 51 57 62 34 39 56 64 69 73 72 63	38 35 41 46 20 26 40 48 54 57 52 49	10 9 9 12 6 9 8 6 6 6 8	92 85 96 105 61 64 96 113 121 128 120 104	7.4 7.3 7.3 7.2 7.1 6.9 7.2 7.0 7.0 7.2 7.5 7.3	5 1 2 1 2 9 2 6 6 4 2 3	0  1 0 4 7 12 19 20 15 10 2

Table 5.--Minor element chemical analyses of streams

August 13, 1969

	Zinc (Zn)		30		0		0		0		0	
	Strontium (Sr)		0		0		740		09		0	
	Lithium Manganese (Li) (Mn)		30		0		0		04		0	
	Lithium (Li)	. S.S.	0	188.	0	•	0	Mass.	0	•	0	
	Iron (Fe)	ont, Ma	80	11e, M	50	, Mass	20	rfield	09	n, Mas	09	
µ8/1	Copper (Cu)	Charlem	10	attuckvi	0	near Conway, Mass.	0	West Dee	0	near Colrain, Mass.	0	
	Cobalt (Co)	River at	0	er at Sh	0		0	er near	0		0	
	Chromium (Cr)	21. Deerfield River at Charlemont, Mass.	0	38. North River at Shattuckville, Mass.	0	45. South River	0	46. Deerfield River near West Deerfield, Mass.	0	50. Green River	0	
	Arsenic (As)	21.	0	38.	0	4	0	46. Dee	0	ĪŪ	0	
	Aluminum Arsenic (Al) (As)		100		0		0		100		0	
Specific conduct-	ance (micro-mhos)		38		76		141		4		93	
Dis-	charge (cfs)		1,070		711		22		1,190		69	

Table 6.--Miscellaneous chemical analyses of streams

Map reference no. (Plate 1)	Station name	Date	Time	Specific conduct- ance (micro- mhos)	Dis- solved oxygen (mg/l)	Tem- pera- ture (°C)	рН
1	Deerfield River diversion canal at	0 (0					
0	Monroe Bridge, Mass	8-21-68	1610	43	7.7	21	6.3
2	Dunbar Brook near Monroe Bridge, Mass	8-21-68	1630	36	7.8	19	6.6
3 4	Deerfield River near Hoosac Tunnel, Mass	8-21-68	1310	83	7.8	23	7.6
5	Fife Brook near Hoosac Tunnel, Mass Deerfield River at Zoar, Mass	8-21-68 8-22-68	1515	31	9.5	15	6.5
	beer fredt River at 20af, mass.	0=22=00	1300	43	8.9	22	7.0
6	Potter Brook near Rowe, Mass	8-21-68	1430	65	8.6	16	7.5
7	Pelham Brook at Rowe, Mass	8-21-68	1410	65	7.7	20	7.1
8 9	Pelham Brook at Zoar, MassCold River at Florida, Mass	8-21-68	1350	58	8.8	19	7.3
10	Black Brook near Drury, Mass	8-21-68 8-21-68	1720 1725	95 46	7.5 8.8	20 17	7.3
11	Cold River near Zoar, Mass	8-21-68	1750	73	7.2	22	7.5 7.6
12	Chickley River at West Hawley, Mass	8-22-68	1020	112	0.2	15	6.8
13	King Brook at West Hawley, Mass	8-22-68	1045	43 48	9·3 8·9	15	6.8
14	Mill Brook (tributary to Chickley River)	0-22-00	1047	40	0.9	15	0.0
	near West Hawley, Mass	8-22-68	1125	93	9.2	16	7.5
15	Chickley River near Charlemont, Mass	8-22-68	1140	64	9.3	19	7.6
16	Legate Hill Brook near Charlemont, Mass	8 <b>-</b> 21-68	1315	63	8.6	20	7.5
17	Deerfield River below Legate Hill Brook,						
- 0	at Charlemont, Mass	8-22-68	1345	46	8.5	22	6.9
18	Bozrah Brook at Charlemont, Mass	8-22-68	1200	90	7.9	19	7.0
19	Mill Brook (tributary to Deerfield River) near Charlemont, Mass	8-21-68	1220	96	9.6	16	7 5
20	Maxwell Brook near Charlemont, Mass	8-21-68	1205	76	9.0	16 16	7.5 7.7
00	D 01 11 D1	0 00 (0	21:05	1.0	0 6		
22	Deerfield River near Charlemont, Mass	8-22-68	1425	48	8.6	22	7.3
23 24	Avery Brook near Charlemont, MassClesson Brook near Buckland, Mass	8-21-68 8-21-68	1130 1015	78 75	9.6 8.9	16	7.7
25	Upper Branch Clesson Brook near Buckland, Mass.	8-21-68	1035	157	7.4	16 15	7.7 7.6
26	Clesson Brook near Shelburne Falls, Mass	8-21-68	1100	130	9.2	18	7.8
27	Clark Brook near Shelburne Falls, Mass	8-21-68	1110	95	9.0	17	7.8
28	East Branch North River below Vermont State						
	line, near Colrain, Mass	8-20-68	1240	170	9.3	19	8.2
29	East Branch North River near Colrain, Mass	8-20-68	1215	112	9.3	19	8.3
30	East Branch North River at Colrain, Mass	8-20-68	1155	136	8.2	18	7.6
31	East Branch North River at Lyonsville, Mass	8-20-68	1140	132	9.5	19	8.6
32	Foundry Brook at Lyonsville, Mass	8-20-68	1125	165	9.2	17	8.0
33	East Branch North River at Griswoldville, Mass.	8-20-68	1110	134	10.0	19	8.6
34	West Branch Brook at North Heath, Mass	8-20-68	1045	56	9.5	16	7.0
25	Sandars Brook near North Heath Mass	8-21-68 8-20-68	1235	45	9.0	20	7.4
35 36	Sanders Brook near North Heath, Mass Taylor Brook near Lyonsville, Mass	8-20-68	1025 1005	51 81	9.1 9.4	15 17	7.2 7.8
37	West Branch North River at Lyonsville, Mass	8-20-68	0950	86	9.6	17	7.8
38	North Direct of Chattachardle Mage	9 00 69	0020	225	77 ),	10	30.0
39	North River at Shattuckville, Mass Deerfield River at Shelburne Falls, Mass	8-20-68 8-22-68	0930 1445	335 63	7.4 8.3	19 21	10.2
40	Deerfield River near Shelburne, Mass	8-22-68	1530	57	6.9	22	7.3
41	Bear River near Conway, Mass	8-20-68	1800	138	7.7	21	8.1
42	Dragon Brook at Shelburne, Mass	8-20-68	1840	250	7.5	20	7.6
43	Creamery Brook at South Ashfield, Mass	8-20-68	1710	138	7.7	18	7.8
44	Poland Brook near Conway, Mass	8-20-68	1730	95	8.0	20	7.8
45	South River near Conway, Mass	8-20-68	1815	170	7.6	22	8.6
47	Deerfield River at West Deerfield, Mass	8-22-68	1620	61	8.7	22	7.3
48	Green River near Leyden, Mass	8-20-68	1330	116	9.6	19	8.4
49	Borden Brook near Leyden, Mass	8-20-68	1220	155	9.2	16	7.9
50	Green River near Colrain, Mass	8-20-68	1345	126	8.7	20	8.4
51	Stafford Brook near Colrain, Mass	8-20-68	1430	190	9.0	17	8.2
52	Green River near Greenfield, Mass	8-20-68	1410	140	7.5	22	8.2
53	Green River at Greenfield water supply dam,	9 00 (0	21.1.	21.0	0 0	00	0.0
54	near Greenfield, MassGlen Brook near Leyden, Mass	8-20-68 8-20-68	1445 1500	140 195	8.3	20	8.2
55 55	Punch Brook near Greenfield, Mass	8-20-68	1540	220	7.1 7.7	21 17	7.0
57	Mill Dwook (twithutawa to Green Trice)						
57	Mill Brook (tributary to Green River) near Greenfield, Mass	8-20-68	1520	138	7.5	15	6.4
58	Green River below Mill Brook, near						
50	Greenfield, Mass	8-20-68	1555	160	7.7	22	8.0
59 60	Green River at Greenfield, Mass	8-20-68	1615	165	7.6	23	8.2
00	Deerfield River near Greenfield, Mass	8-22-68	1655	68		23	7.4

Table 7.--Instantaneous suspended-sediment concentrations of streams

Date	Time	Discharge (cfs)	Concentration (mg/1)	Suspended sediment discharge (tons/day)	Date **	Time	Discharge (cfs)	Concentration (mg/l)	Suspended sediment discharge (tons/day
			21. 1	Deerfield Rive	r at Charlemont,	Mass.			
APR 26, 1967	1830	1,780	5	20	MAR 19, 1968	1315	2,480	16	107
MAY 24	1650	1,200	1 14	3	MAR 20	0900 1645	2,140	5	29.
JUN 27 MAR 18, 1968	1415 1415	1,240 2,570	52	47 361	MAR 27	1335	2,550 1,760	13 19	90 90
MAR 18	1845	3,050	90	741	MAR 24, 1969	2300	1,250	8	27
MAR 19	0845	2,790	12	90					
			38. 1	North River at	Shattuckville, M	ass.			
APR 26, 1967	1800	394	2	2	MAR 27, 1968	1405	474	25	32
MAY 24	1530	143	4	2	MAR 24, 1969	2230	225	24	15
JUN 27 MAR 18, 1968	1330 1515	171 980	6 216	3 572	MAR 25	1120 1545	512 768	78 101	108 209
MAR 18	1810	1,840	195	969	MAR 26	1345	691	30	56
MAR 19	1145	1,500	153	620	MAR 28	0945	332	19	17
MAR 19	1620	1,500	173	701	APR 10	1810	2,370	292	1,870
MAR 20	1145	899	14	34	APR 11	1115	1,520	79	324
MAR 20	1610 2100	1,160 1,450	80 92	251 360	APR 24	1110	1,290	79	275
			45.	. South River	near Conway, Mas	s.			
APR 26, 1967	1645	87	8	2	MAR 24, 1969	2115	67	27	4.9
MAY 24	1445	38	2	Trace	MAR 25	0845	180	214	104
JUN 27 MAR 18, 1968	1245 1600	41 647	6 314	•7 549	MAR 25	1205 1445	399 480	469 390	<b>5</b> 05 <b>5</b> 05
MAR 19	0945	340	150	138	MAR 25	2200	304	158	130
MAR 19	1500	354	162	155	MAR 26	1410	176	38	18
MAR 20	1000	191	43	22	MAR 28	1015	85	13	3.0
MAR 20	1435 1655	280 157	98 402	74 170	APR 10	1730	390	184	194
			46. Deer	field River n	ear West Deerfiel	d, Mass			
APR 26, 1967	1715	2,100	3	20	MAR 19, 1968	1430	5,070	39	534
MAY 24	1400	1,720	2	9	MAR 20	1030	3,830	6	62
JUN 27	1200	1,160	6	20	MAR 20	1400	3,790	7	72
MAR 18, 1968 MAR 18	1330 1645	5,730 5,990	142 132	2,200 2,130	MAR 27	∍ 1625	2,890	32	250
			50.	Green River	near Colrain, Mas	s.			
MAR 18, 1968	1450		107		MAR 25, 1969	1000	195	91	48
MAR 18	1745		93		MAR 25	1350	340	47	43
MAR 19	1115 1545		101 66		MAR 25	1615 1500	360 281	59 25	57 19
MAR 20	1120		12		MAR 28	0915	148	1	.40
MAR 20	1530		21		APR 10	1830	820	266	589
MAR 27	1500		28		APR 11	1040	523	34	48
MAR 24, 1969	2200	98	7	1.9					

TABLE 8 .-- CHEMICAL ANALYSES OF GROUND WATER

LOCA	L NUMBER	DATE OF Sample	TEN- PERA- TURE (DEG C)	SILICA (SIO2) (MG/L)	TOTAL IRON (FE) (UG/L)	TOTAL MAN— GANESE (MN) (UG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (HG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)
						ASHFI	IELD						
ANW	15 28	11-21-68 11-21-68	9.0 12.0	8.9 12	10 100	0	30 29	2.5	2.9 5.0	1.8	91 84	0	13 17
						BUCKL	AND						
B 3W B 3W B 3W	3 9 1'5	11-21-68 08-04-67 11-21-68	10.0 13.0 11.0	15 11 17	50 510 500	0 90 60	12 20 9.2	3.2 1.6 3.4	4.4 2.2 4.2	1.3 2.7 2.1	44 60 40	0 0 0	6.1 11 16
						CHARLE	MONT						
CEM CEM CEM	12 23 39 40	08-07-67 11-21-68 12-03-68 11-21-68	12.0 10.0 9.0 14.0	6.6 15 9.2 9.8	30 40 13000 30	10 0 1400 0	10 15 16 24	1.6 2.2 3.3 9.3	2.3 6.5 2.1 7.8	1.5 .8 .8 3.2	16 54 67 28	0 0 0	13 17 6.9 28
						COLRA	IN						
CSW CSW CSW	9 10 12 13	02-23-50 11-26-68 01-17-49 01-04-49	10.0	12	140 100 30 80	0 0	25	2.1	3.8	1.9	44 65 68 28	0	13
CSW	14	05-18-53	10.0	9.9	0	0	80	3.3	5.0	4.5	120 196	0	22
CSM	24	04-06-54		707	30						88		32
						CONW	AY						
CAM CAM CAM	178 183 184	12-04-68 10-08-40 12-04-68	10.0 10.0 10.0	9.5	10 400 30	o	26  38	2.1	1.8  3.6	1.5  2.7	71 86 113	0	13
						DEERFI	ELD						
DFW DFW DFW DFW DFW	33 42 49 50 51 55	11-21-68 04-10-64 11-21-68 11-21-68 12-03-68 11-26-68	11.0 10.5 11.0 10.0 11.0	14 6.8 15 .4 10	260  30 80 30 470	20 0 0 10	24 1.8 38 18 26 18	6.2 .6 15 3.2 10 2.6	14 410 7.4 6.1 8.9 3.0	3.6 3.1 .4 .8 3.2	66 755 146 13 62 21	0 79 0 0 0	25 125 48 .2 18 20
						FLORI	DA						
FUW	19	12-10-68	10.0	9.4	50	20	25	4.6	2.8	2.5	90	0 ·	9.2
						GREENF	I EL D						
GRW GRW GRW GRW GRW GRW	16 17 19 19 19	07-22-52 12-05-68 06-07-56 11-05-56 06-11-57 02-11-58	12.0	6.2	300 80 70 70 100	180	42	2.3	128	2.3	85	0	20
GRW GRW GRW GRW	19 19 19 19	06-11-58 10-30-58 02-17-59 06-20-59 10-17-60			70 70 70 80 130	50 40 40 130 0	-00-00 -00-00 -00-00 -00-00			majorati min min min min majorati majorati			
GRW GRW GRW GRW	19 19 19 19	02-23-61 06-16-61 10-06-61 03-01-62 06-14-62			30 50 100 100	0 0 60 30 0							
GRW GRW GRW GRW GRW	19 19 19 19	10-16-62 03-26-63 06-10-63 10-02-63 02-06-64			200 150 300 150 80	0 240 140 40 60							
GRW GRW GRW GRW	19 19 19 19	04-29-64 06-08-64 09-11-64 01-26-65 11-21-68	10.0	10	180 120 80 160 80	140 0 40 40 80	9.0	4.3	  5.6		21	0	21
GRW GRW GRW GRW	37 37 39 44 46	09-13-66 09-24-66 09-14-66 09-28-66 09-22-66		-00-100 -00-100 -00-100 -00-100 -00-100	50 200 60 210 1060	360 210 240 140 90							

TABLE 8.--CHEMICAL ANALYSES OF GROUND WATER--CONTINUED

LOCAI	L NUMBER	CHLO- RIDE (CL) (MG/L)	FLUO- RIDE (F) (MG/L)	NITRATE (NO3) (MG/L)	DIS- SOL VED SOLIDS (RESI- DUE AT 180 C)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS)	HARD- NESS (CA,MG) (MG/L)	NONCAR- BONATE HARD- NESS (MG/L)	ALKA- LINITY AS CACO3 (MG/L)	SPECI- FIC CON- DUCT- ANCE (MICRO- MHOS)	РН	COLOR	SOURCE OF DATA
ANW	15	6.9	0.1	2.4	122	ASHF 114	IELD 85	10		200	7.7	2	1
ANW	28	3.7	•2	• 0	117	111	80	12	dereto	183	7.6	2	1
							LAND	_		115	7.0	-	,
B3W B3W	3	4.0 2.8	•1	9.2 .0 .1	88 94 73	77 82 73	43 56 37	7 8 4		115 131 104	7.2 7.4 7.5	5 30 33	1 1 1
B3W	15	1.1	•1	• •	,,	CHARL				101	1 4 2		_
CEW	12	6.1	.1	5.0	60	54	32	18		88	6.4	3	1
CEM	23 39	2.0 1.1	.2	.0 .1	95 75	85 73	46 54	2 0		129 122	7.4 7.1	1 2 2	1 1 1
CEM	40	10	•1	68	181	174 COLR	98 AIN	75		286	7-1	۷	*
CSW	9	3.4		1.4			38			who an	6.7	2	3
CSW	10	12	-1	6.0	100	102	71 63	18		173	7.4 6.9	0	1 3
CSW	13 14	19 2.0	-00 -00 -00 -00	.4 1.0	_		38 136				6.1 7.7	0	3
CSW	14	12	• 0	16	263	259	213 104	52		433	8.0 7.8	0 2	1 3
CSW	24	2.4		•0			WAY						
CWW	178	4.0	.0	- 0	96	90	69	11		154	7.5	2	1
CMM	183 184	1.9 5.1	-1	• 0 • 1	136	134	79 104	11		231	7.6 7.6	0	3 1
						DEERF	IELD						
DFW DFW	33 42	33 5.5	•1 6•3	1.0	160 1050	153	86 7	32 0		272 1630	7.1 9.2	2 5	1
DFW DFW	49 50	5.0 46	•1 •2	•7 •1	211 114	202 81	157 58	37 48		337 184	7.5 6.8	3 2	1
DFW DFW	51 55	28 9.1	.0	30 19	183 94	164 94	106 56	55 38		299 149	7.1 6.8	3 2	1
						FLOR	IDA						
FUW	19	8.2	<b>.</b> 0	.0	107	106	82	8		185	7.6	2	1
		2.0		,		GREEN	FIELD 51	******		min-ajta	7.9	27	3
GRW GRW GRW	16 17 19	3.2 225 2.6	.1	2.2 .1	492	470	114	45	20	912	7.2 6.2	1 0	I 3
GRW GRW	19	3.6 2.8		•2			30 32		17 16		6.5	2 2	3
GRW	19	3.8		• 3			33		16	-	6.3	2	3
GRW GRW	19	3.0 4.4					34 33		13		6.2	2	3
GRW GRW GRW	19 19 19	4.0 5.0 4.0		•1			36 38 38		15 14 14		6.3 6.5 6.3	0 2 0	3 3 3
GRW	19	2.5	en e				38		13		6.4	5	3
GRW GRW	19 19	4.5 5.0		• 3			48 40		13 13		6.3	10	3
GRW GRW	19	7.0		•1			42 42		12		6.2 7.0	10 10	3
GRW GRW	19 19	4.0 10		•2 •1	-0.00		56 46		20 8	100-100 100-100	6.4	5 5	3 3
GRW GRW	19 19	14 7.0		• 2 • 4			56 60		15 15		6.6 6.4	10	3 3
GRW	19	10		• 3			56 66		13	edo-cas	6.0	5	3
GRW GRW	19	10		.4			52 54		17 18		6.7	20 12	3
GRW GRW	19 19	8.5 8.1	-1	.3 1.6	74	70	52 40	23	18	120	6.4 7.0	5	3
GRW	37	3.0		• 1			108		90		8.0	5	3
GRW GRW	37 39 44	2.6 2.8 2.4		•1 •1			110 104 88		88 94 76		8.0 8.2 8.2	2 5 3	3 3 3
GRW		/ - %			made report				(0)				

TABLE 8.--CHEMICAL ANALYSES OF GROUND WATER

LOCAL	NUMBER	DATE OF Sample	TEM- PERA- TURÉ (DEG C)	SILICA (SIO2) (MG/L)	TOTAL (RON (FE) (UG/L)	TOTAL MAN- GANESE (MN) (UG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (HG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)
					G	REENFIELD-	-CONTINUE	D					
GRW GRW GRW GRW	48 49 50 53	09-24-66 09-28-66 09-29-66 09-29-66 11-21-68	10	8.0	640 230 140 140 40	30 130 60 60 10	8.5	3.6	5.9		19		14
GRW GRW GRW GRW	55 57 58 59 60	11-26-68 06-29-67 06-29-67 06-29-67 06-29-67	9.5	7.9   	60 540 40 570 160	10 40 100 120 80	44   	5.1	4.2   	1.5	150	0	24   
GRW GRW GRW	61 65 65	06-29-67 07-24-67 08-01-67		==	300 200 -80	0 120 200							
LEMES		12 11 /0	4 0	0.3	40	HAWL		2 2	4.4	4.0	1.24	٥	
нми	6	12-11-68	6.0	9.2	40	0 HEA1		3. 3	4.6	4.9	126	0	13
HNW	9 12	12-12-68 11-20-68	9.0 10.0	6.2 10	<b>70</b> 60	0 10	15 11	1.8	<b>6.6</b> 2.9	3.0 .7	23 24	0	12 8.8
EUW EUW EUW	3 4 6 12	04-21-54 03-11-42 12-07-48 12-12-68	10.0	12	120 180 1600 30		96	14	9.6	3.8	18 49 84 22		=
M3W M3W M3W	1 2 3	11-10-55 12-10-68 12-10-68	5.0 8.0	3.8	3200 80 1100	10 2000	9.1 74	1.7 3.8	1.1	•8	38 27 214	 0 0	9•2 26
ROW ROW ROW	12 13 15 31	09-29-66 10-13-66 12-05-68 11-22-68	10.0	9.9	200  130 20	30  0 30	8.8 21	2. 2 7. 3	3.4 6.0	3.4 4.1	52  22 69	 0 0	
						SAVO	Υ						
SFW	6	02-01-62			120						8		
						SHELBL	IRNE						
SKW SKW SKW SKW	12 16 18 19 32	03-18-41 08-26-46 11-05-45 10-26-65 09-01-48			30 10 50 280 200	130					61 90 206 112 88		
SKW	34	12-03-68	11.0	9.6	80	20	31	2-4	6.5	2.4	98	0	22

TABLE 8.--CHEMICAL ANALYSES OF GROUND WATER--CONTINUED

LOCAL	NUMBER	CHLO- RIDE (CL) (MG/L)	FLUO- RIDE (F) (MG/L)	NITRATE (NO3) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS)	HARD- NESS (CA,MG) (MG/L)	NONCAR- BONATE HARD- NESS (MG/L)	ALKA- LINITY AS CACO3 (MG/L)	SPECI- FIC CON- DUCT- ANCE (MICRO- MHOS)	PH	COLOR	SOURCE OF DATA
					G	REENFIELD	CONTINU	ED					
GR₩	48	2.0		0.2			94		90	-	7.8	14	3
GRW	49	2.6		. 3	****		74		68		8-1	3	3
GRW	50	2.6		• 2		40-40	72		104		8.2	4	3
GRW GRW	53 54	2.6 14	.0	1.6	76	66	72 36	20	104	114	8.2 6.9	4 2	3 1
GKW	34	¥ 4	• 0	1.0	10	00	30	20		117	0.,	_	•
GRW	55	3.0	.0	.0	169	164	131	8		294	8.0	2	1
GRW	57			.0			140		82		7.9	4	3
GRW GRW	58 59	2.6 3.2		.0			100 100		90 94		8.1 8.2	3	3
GRW	60	4.0		.0			102		92		8.2	3	3
GRW	61	7.2		.0			126	₩ ==	122		8.0	4	3
GRW GRW	65 65	3.0 3.0		.2			100 90		88 86		8.0 7.8	4	3
OIN	0,5	3.0		• •					•		1.00		<b>3</b>
						HAW	LEY						
нми	6	3.5	+1	5.1	141	143	1 06	3		246	7.8	3	1
						HEA	тн						
HNW	9	6.0	.1	26	93	88	45	26	****	145	7.0	3	1
HNW	12	6.8	.0	4.9	67	59	36	16		93	7.0	1	1
						LEY	DEN						
LUW	3	2.2		. 8			25			without	6.3	3	3
LUW	4	9.2		8.0			117	where	-		7.1	2	3
LUW	6	2.8		1.9 280	501	506	70 297	279		736	7.6	2	3 1
ŁUW	12	68	• 0	280	201			219		130	6.9	2	T
						MON	IROE						
M3W	1	2.2		- 0		400-400	48				7.5	4	3
M3W	2	• 5	• 0	2.0	48	41	30	8		71	7.1	15	1
мзพ	5	20	• 0	• 8	258	261	200	24		450	7.5	3	1
						RO	IWE						
ROW	12	1.8		• 2			62			-	7.3	10	3
ROW	13												3
ROW ROW	15 31	6.0 20	•1 •1	1.1	63 131	62 124	31 82	13 26		101 209	6.8 7.1	2	1
			• •		232			20		207		•	•
0511						SAV						_	
SFW	6	19		-4			30				5.6	5	3
						SHELB	JURNE						
SKW	12	1-4		-1			67				7.1	0	3
SKW	16	3.2 8.2		1.8 15	-		88				7.3 7.4	2	3
SKW SKW	18 19	2.2		.5			194 142				8.0	2	3
SKW	32	4.8		• 2			64				6.7	8	3
CKII	2.4		3	_	125	126	0.0	7		212		_	
SK W	34	4-1	•2	•0	135	126	88	7		212	7.8	0	1

<sup>11,</sup> U.S. GEOLOGICAL SURVEY LABORATORY ANALYSIS; 3, MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH LABORATORY ANALYSIS.

Table 9.--Chemical analyses of precipitation (Analytical results in milligrams per liter except as indicated.) (Analyses by U.S. Geological Survey.)

Hq	4.1	4.2	4.5	4.5	5.2	4.1	4.1	4.1	5.2	4.55
Specific Conductance (micromhos)	745	32	28	16	13	L+1	36	04	16	14
Ammonia Nitrogen (MH)	09.0	.25	.15	8	.20	.25	.25	.15	•30	.10
Phosphate (POt)	0.050	.075	040.	070.	.055	070.	.020	.083	.065	.010
Nitrate (NO3)	0.10	.05	.05	.05	00.	.05	.05	.16	.26	.05
Chloride (Cl)	0.25	.25	9.	.50	.50	.25	.25	9.	8.	.35
Sulfate (SO4)	9.5	8.4	7.2	3.85	3.25	5.0	3.45	6.5	α	2.35
Bicarbonate (HCO3)	0.0	o,	o.	o.	o.	0	o.	o.	0.	0.
Potassium (K)	0.1	r,	r.	r,	ų.	ú	ď	ď	1.7	٦.
(sN) muibod	0.2	r.	m.	ď	ď	Ċ.	ď	<b>4</b> .	ů.	r.
(gM) mwisəngaM	60.0	.01	t2.	.17	.22	90°	00.	1.	.05	.01
Calcium (Ca)	0.5	ď	1.3	١.	φ	9.	rļ.	ó	ŗ.	÷
Date	5/ 1/68 <b>-</b> 5/28/68	5/28/68 <b>-</b> 6/24/68	6/24/68- 8/22/68	8/22/68 <b>-</b> 9/26/68	9/26/68-	4/29/68- 5/28/68	5/28/68 <b>-</b> 6/28/68	6/28/68 <b>-</b> 8/21/68	8/21/68- 9/26/68	9/26/68-
Station name and location	Monroe, Massachusetts Lat 42°43'14", long 72°59'39"	At Monroe State Forestry Camp				Charlemont, Massachusetts Lat 42°37'33", long 72°51'20"	Franklin County, elev. 540 it At surface-water station no. 21			

#### TABLE 10. DESCRIPTION OF WELLS AND BORINGS

LOCAL WELL NUMBER: FOR EXPLANATION OF THE WELL- AND BORING-NUMBERING SYSTEM, SEE TEXT.

LOCATION: FOR EXPLANATION OF THE WELL- AND BORING-LOCATION SYSTEM, SEE TEXT.

ALTITUDE OF LAND-SURFACE DATUM: ALTITUDES ARE EXPRESSED IN FEET ABOVE MEAN SEA LEVEL.

METHOD DRILLED: A, AIR-ROTARY; B, BORED OR AUGERED; C, CABLE TOOL; D, DUG, H, HYDRAULIC-ROTARY; V, DRIVEN; W, DRIVE-WASH.

WELL FINISH: G, GRAVEL WALL (COMMERCIAL SCREEN); O, OPEN END; P, PERFORATED OR SLOTTED CASING; S, SCREEN; W, WALLED OR SHORED; X, OPEN HOLE IN AQUIFER (GENERALLY CASED TO BEDROCK).

DEPTH TO CONSOLIDATED ROCK: DEPTHS IN FEET BELOW LAND SURFACE AS MEASURED OR REPORTED.

LOG AVAILABLE: D, DRILLER'S LOG; G, GEOLOGIST'S LOG; "\*" INDICATES LOG IS IN TABLE 11.

LOCA WEL NUMB	L	LOCATION	ALTI- TUDE OF LSD (FT.)	OWNER	DATE DRILLED (YEAR)	METHOD ORILLED	WELL FINISH	CASING DIAM- ETER (IN.)	WELL DEPTH (FT.)	DEPTH TO CONSOL. ROCK (FT.)	LOG AVAIL- ABLE
				ASI	HFIELD						
ANA ANA ANB ANW ANW	1 2 3 12 1	423150N0724P21.1 423137N0724705.1 423037N0724636.1 423043N0724633.1 423042N0724616.1 423345N0724804.1	1275 1135 989 975 1040 1010	USGS USGS USGS MDPW TOMLINSON JOHN CLARK MALCOM S	1967 1967 1967 1955 1929	8 8 8  C	 X X S	4 4  6	43 97 64 14 311	35	G* G* G* D* 
4 N W 4 N W 4 N W 4 N W	3 4 5 7 8	423055N0724R21.1 423302N0724529.1 423159N0724901.1 423317N0724933.1 423057N0724522.1	1520 1040 1290 1380 860	HALL HOWARD MUKA STEPHEN JR GODFREY LELAND TATRO CHARLES F FIELD RICHARD F	1941 1946 1947 1947	0000	X X X X	6 6 6	74 49 49 100 123	15 10 1.8 20 37	
ANW ANW ANW ANW	9 10 11 13 14	423056N0724514.1 423222N0774707.1 423116N0724744.1 423215N0724905.1 423259N0724543.1	1060 1170 1360 1470 1090	BULLITT WILLIAM LEONARD RALPH E MERKEL MABEL S ASHFIELD TOWN	1950 1951 1952 1959 1962	c c 	X X X X	6 6 6	153 56 87 110 160	5 40 9 0	
ANW ANW ANW ANW	15 16 17 19 20	423104N0724647.1 423222N0724838.1 423023N0724550.1 423159N0724914.1 423156N0724815.1	1020 1400 840 1280 1260	STEINMETZ PHILLII MAYO WALTER M EBEL JOHN H OTT JOHN B	1963 1963 1966		X X X X	6 6 6 6	100 89 55 112 100	15 17 1	***
ANW ANW ANW ANW	21 22 23 24 25	423125N0724747.1 423130N0724936.1 423026N0724841.1 423024N0724841.1 423022N0724943.1	1350 1460 1565 1570 1580	ASHFIELD GOLF CL HENRY GILBERT PACKAPD GEORGE SCHREIBER A LUNDRIGAN K	UB 1964 1963 1965 1966 1965		X X X X	6 6 6 6	300 85 95 90 80	7 75 42 27 12	
ANW ANW ANW ANW	26 27 28 29 30	423020N0724344.1 422844N0724548.1 423035N0724633.1 423035N0724637.1 422838N0724601.1	1590 1220 985 990 1240	FULLER DAVID H SHEPARD R H DICKINSON C F NYE HARLAN NICHOLLS HOWARD	1963 1963 1953 1952 1963	C C	X X X X	6 6 6 6	55 85 158 184 215	14 135 	
ANW ANW ANW ANW	31 32 33 34 35	424335N0724458.1 423036N0724639.1 423031N0724634.1 422913N0724712.1 423118N0724826.1	825 990 935 1650 1440	GRUNDEN O S PHELPS ROGER WICKERSON LOMAS RAYMOND	1965 1966 	H D D	M 0 X X	6 6 36 38 24	215 125 18 9 15	26 85 	
ΔNW	36	423134N0724741.1	1250			D	W	36	6		
				BERI	NARDSTON						
BAB BAW BAW BAW	1 5 13 43	423923N0733345.1 423916N0723353.1 423913N0723405.2 423913N0723405.1	363 365 370 370	MDPW YOUNGS INN BERNARDSTON BERNARDSTON	1931 1936 1955	D D C	0 W P S	2 30 150 8	75 26 30 67		D* 
				BUC	CKLAND						
B3A B3A B3A B3A B3B	1 2 3 4 1	423700N0724632.1 423636N0724631.1 423540N0724709.1 423428N0724807.1 423403N0724808.1	508 515 558 664 690	USGS USGS USGS USGS MDPW	1967 1967 1967 1967 1955	8 8 8	0	4 4 4 4	79 97 29 21 10		G* G* G* D*
838 838 838 838 838	2 3 4 5 7	423649N0724605.1 423702N0724441.1 423647N0724414.1 423605N0724645.1 423537N0724712.1	490 525 401 526 560	MDPW MDPW MDPW MDPW MDPW	1938 1946 1944 1950 1955		0 0 0 0		26 17 18 7 20	18	D* D* D D*
838 838 838 83W 83W	8 9 10 1 2	423522N0724721.1 423707N0724451.1 423404N0724836.1 423624N0724634.1 423657N0724456.1	587 439 765 515 610	MDPW MDPW MDPW GORMAN WOODSON JOHN	1955 1946 1934 1948 1952	  c c	0 0 0 x x	6	17 8 8 150 366	116	0* 0 0

#### TABLE 10. DESCRIPTION OF WELLS AND BORINGS

WATER LEVEL: LEVELS GIVEN IN FEET BELOW LAND SURFACE; "+" INDICATES WATER LEVEL ABOVE LAND SURFACE; "F" INDICATES FLOWING WELL; "\*" INDICATES WATER LEVELS TABULATED IN TABLE I2.

WATER USE: C, COMMERCIAL; H, DOMESTIC; I, IRRIGATION; P, PUBLIC SUPPLY; S, STOCK SUPPLY; T, INSTITUTIONAL; U, UNUSED.

WELL USE: O, OBSERVATION; T, TEST HOLE; U, UNUSED; W, WELL IS BEING PUMPED; Z, DESTROYED.

YIELD: AS REPORTED BY THE DRILLER OR OWNER OR AS MEASURED, IN GALLONS PER MINUTE (GPM).

PUMPING PERIOD: FOR PUMPING PERIODS OF LESS THAN ONE HOUR, THE FOLLOWING CODES ARE USED: A, THROUGH 15 MINUTES; B, 16 TO 30 MINUTES.

QUALITY OF WATER TYPE: C, COMPLETE CHEMICAL ANALYSIS; M, MULTIPLE (INCLUDES ONE COMPLETE AND MANY PARTIAL CHEMICAL ANALYSES); P, PARTIAL CHEMICAL ANALYSIS; "\*" INDICATES ANALYSIS IS IN TABLE 8.

DATE

				DATE						
LOCA		WATER-BEARING MATERIAL	WATER	WATER	WATER	WELL		DRAW-	PUMPING	QH
WEI		nF.	LEVEL	LEVEL	USE	USE	YIELD	DOWN	PERIOD	TYPE
NUM	BER	MAJOR AQUIFER	(FT.)	MEAS.			(GPM)	(FT.)	(HOURS)	
			ACH	FIELD						
			MJII	11665						
ANA	1	FINE GRAINED SAND	29	10-67	U	Т				
ANA	2	FINE GRAINED SAND	45	10-67	Ü	T				
ANA	3	FINE GRAINED SAND			Ú	T				
ANB	12				U	T				
ANW	1		67	-29	Н	W	8			
ANW	2	SAND AND GRAVEL	F	-48	Н	W	15			
ANW	3	**	29	9-41		W	6			
ANW	4		14	5-46	H H	W	30			
ANW	5		11	9-47	H	W	10			
ANW	7				H	W	6			
ANW	8	mir sape	10	10-48		W	4			
ANW	q		2.4							
ANW	10		36 1	10-52 -51	Н	W	14 12			
ANW	11		1	-52	н	W	15			
ANW	13	m m		- 72	н Р	W	28			
ANW	14					W	4			
ANW	15	***	F			W				C*
ANW	16 17	••	20		Н	W	5			
ANW	19		20 15	10-63 8-63	Н	W W	10 15			
ANW	20		20	7-66	H	W	4			
					11					
ANW	21		1	8-64	U	U	1			
ANW	22	SHALE	20	-63	Н	ы	20			
ANW	23 24		9		Н	W	12			
ANW	25			12-66	Н	₩ ₩	10 15			
7 111	2 7				Н	77	10			
ANW	26		22	7-63	Н	W				
ANW	27		14	11-63	H	W	15	***		
ANW	28		9	-53	Н	W	20		A	C*
ANW	29		16	-53	Н	H	16			
ANW	3.0	<b>∞ ∞</b>	16		Н	W	20			
ANW	31		30	7-66	Н	W	35			
ANW	32				H	ü	75			NA 101
ANW	33		8	5-68		Я				
ANW	34		0	5-68	Н	H				
ANW	35		5	5-68	υ	0	***			
ANW	36	TILL	2	5-68	U	0				
			_	2 00	Ŭ	J				
			BERN	ARDSTON						
BAB	1					_				
BAW	5				U C	T W				
BAW	13	GPAVEL	12	7-52	P	W	250			
BAW	43	GRAVEL	10	6-57	þ	W	305		48	
					,					
			BUC	KLAND						
вза	1	SILTY CLAY	8	10-67		т				
B 3A	2	CLAYEY SILTY SAND	10	10-67	U	Ť	do es			
B3A	3	CLAYEY SAND	7	10-67	Ŭ	Ť				
83A	4				ŭ	Ť			-	
8 38	1		2	4-55	Ū	T				
0.30	2	CAND AND CDAYE								
838 838	2	SAND AND GRAVEL			U	T T				
838	2 4	UNCONSULTDATED SAND AND GRAVEL	0	8-44	U	Ť				
838	5	SAND AND GRAVEL			U	Ť				
838	7	UNCONSOLIDATED SAND AND GRAVEL	10	4-55	Ü	Ť				
•										
838	8		1	4-55	U	Ţ	min min			
B3B	9				Ų	Ţ				
838 83W	10	METAMORPHIC FINE GRAINED	14	6-48	υ	T W				
B3W	2	CHERTY OR SILICEOUS METAMORPHIC	54	-52		W	1		6	
55%		COARSE GRAINED	74	7 -	Н					

TABLE 10. DESCRIPTION OF WELLS AND BORINGS--CONTINUED

LOCAL WELL	L	LOCATION	ALTI- TUDE OF LSD (FT.)	OWNER	DATE DRILLED (YEAR)	METHOD DRILLED	WELL FINISH	CASING DIAM- ETER (IN.)	WELL DEPTH (FT.)	DEPTH TO CONSOL. ROCK (FT.)	LOG AVAIL- ABLE
				BUCKLAN	DCONTIN	IUED					
83W 83W 83W 83W	3 4 5 6 7	423654N0724547.1 423656N0724530.1 423510N0724732.1 423642N0724636.1 423509N0724454.1	540 522 605 554 965	GOULD GARDNER MOHAWK TRAIL H S PURINTON G E GOODNOW LEON F WAID JESSE	1943 1965 1965 1963 1965	CA	x x x x 0	6 6 6 36	90 400 127 195 14	35 75 55 93	
83W 83W 83W 83W	8 9 10 11 12	423606N0724610.1 423612N0724634.1 423642N0724627.3 423648N0724634.1 423451N0724901.1	475 530 490 550 920	USGS USGS HALE NATHAN MOWRY EDWARD SCOTT JAMES E	1967 1967 1965 1964 1965	W W  A	P P X X X	2 2 8 6 6	67 64 145 218 120	62 98 63 100	G*
83W 83W 83W 83W	13 14 15 16 17	423645N0724615.1 423526N0724726.1 423651N0724632.1 423702N0724416.1 423701N0724416.1	500 630 545 440 440	MARSOLAIS H LITCHFIELD C M RICE KENNETH SHELBURNE FALLS SHELBURNE FALLS	1965 1962 1965 1965	D C W	W X S P	30 6 6 2 2	20 85 126 18 10	35	D D
83W 83W 83W 83W	18 19 20 21 22	423658N0724416.1 423600N0724414.1 423700N0724411.1 423702N0724412.1 423704N0724414.1	420 430 420 415 420	SHELBURNE FALLS SHELBURNE FALLS SHELBURNE FALLS SHELBURNE FALLS	1965 1965 1965 1965 1965	W W W W	P P P	2 2 2 2 2	15 8 22 7 7		D D D
83W 83W 83W 83W	23 24 25 26 27	423707N0724415.1 423547N0724624.1 423643N0724618.1 423643N0724614.1 423505N0724727.1	420 900 505 495 670	SHELBURNE FALLS ROSE CORWIN H NELSON WILLIAMS F BILLIEL DONALD	1965 1965 1965 1962 1955	C	 x x x x	8 6 6 6	44 300 99 115 127	12 73  30	D *
				CHAP	LEMONT						
CEA CEB CEB CEB	1 2 3 7 8	423805N0725351.1 423833N0725534.1 423921N0725614.1 423739N0724414.1 423748N0725408.1	568 602 630 410 563	USGS USGS MDPW MDPW MDPW	1967 1967 1938 	B B	0 0	4	92 10 21 10 40		G* G D* D*
CEB CEB CEB CEB	10 11 12 24 34	423734N0725301.1 423740N0725222.1 423819N0725438.1 423831N0725522.1 423849N0725520.1	545 545 562 600 788	MDPW MDPW MDPW MDPW MDPW	1939 1938 1946  1938		0 0 0 0		15 25 29 10 19	15	D* D* D* D
CEM CEM CEM CEM	1 2 3 4 5	423743N0725212.1 423736N0725233.1 424017N0725335.1 423739N0725229.1 423936N0725347.1	600 650 1590 570 1420	TURNER DORA HIGH SCHOOL LEE FRANK H LANDUE O A RUSSELL MARY C	1940 1949 1949 1951	0 C C C	W X X P X	240 6 6 6	20 291 54 54 47	100 21 23	D*
CEM CEM CEM CEM	6 10 11 12 13	423734N0725253.1 423719N0724727.1 423739N0725210.1 423816N0725436.1 423753N0725257.1	550 511 580 570 800	HAWKS NORMAN BROWNWORD W CLARK BROTHERS USGS PURINTON R A	1949 1947 1950 1967	0 %	x s x o x	6 6 6 2 6	91 140 240 55 95	56 64 10	D  G*
CEM CEM CEM	14 15 16 17 18	423735N0725301.1 423735N0725301.2 423739N0725224.1 423741N0725210.1 423708N0724747.1	540 540 560 590 510	KOLNACKI JOSEPH KOLNACKI JOSEPH WILSON RAY FEDERATED CHURCH DALLY A K	1954 1946 1965 1947	D B B 	Ж  х х	2 8 4 4 6	5 26 66 125 177	8  25 120	
CEW CEW CEW	19 20 21 22 23	423729N9724549.1 423729N9724549.2 423736N9725252.1 423824N9725446.1 423726N9724711.1	525 525 560 575 510	BLISS VERNE BLISS VERNE STETSON FRANK MOHAWK PARK ADAMS CAROL	1965 1965 1964  1965	A D A D	x 0 x 0 x	6 48 6 48 6	200 6 115 25 100	63	
CEM CEM CEM	24 25 26 27 28	423741N0725149.1 423739N0725213.1 423756N0725258.1 423747N0725332.1 423752N0725338.1	580 580 920 550 545	NEWELL RALPH KIRK NORMAN RAYMOND DONALD BARRETT EARLE B BARRETT EARLE B	1966 1966 1965 1949 1949	  C C	x x 0 0	6 6 6 6	185 150 80 310 13	13 80 15	
CEW CEW CEW	29 30 31 32 33	423745N0725256.1 423919N0725614.1 423736N0725258.1 423941N0725150.1 423739N0725222.1	705 630 545 1390 560	ASKEW DORIS HOYT CHARLES TAYLOR THERON BURT HAROLD ANNEAR CYRUS	1959 1966 1965 1965 1965	c c 	 x x x	8 6 6 6	137 91 175 145 115	35 30 16 89	
CEM CEM CEM	34 35 36 37 38	423748N0725259.1 423744N0725212.1 423739N0725207.1 423994N0725304.1 423718N0724527.1	780 600 580 920 485	TILLEY CHARLOTTE TURNER LEON SEVIGNY ROBERT WARFIELD AGNES PARKER FLOYD	1965 1965 1964 1945 1967	 c c	x x  x x	6 6 6 6	145 156 102 84 30	18 70  10	
CEM	39 40	423716N0725231.1 423725N0724711.2	645 510	THUNDER MT CORP ADAMS CAROL	1952	C D	X W	6 48	82 13	8	400 ASP

TABLE 10. DESCRIPTION OF WELLS AND BORINGS--CONTINUED

LOC: WE! NUM!	LL	0F	WATER LEVEL (FT.)	DATE WATER LEVEL MEAS.	WATER USE	WELL	YIELD (GPM)	DRAW- DOWN (FT.)	PUMPING PERIOD (HOURS)	QW TYPE
		В	UCKLAND	CONTINUE						
83W 83W 83W 83W	3 4 5 6 7	   CLAY	10 38	-43 9-65 	H T C H	₩ ₩ ₩ ₩	2 48 2 6	143 20	4	C*
B3W B3W B3W B3W	8 9 10 11	CLAYEY SILT OR LOESS SILTY SAND	 6 5 51 110	8-67 -65 11-64 8-65	U  H H	T T W W	20 3 10	100	5 2 4	C*
83W 83W 83W 83W	13 14 15 16 17	SAND GRAVEL	75 57	8-65 8-62 	H H U U	₩ ₩ Τ Τ	8 6	20	4 16	C*
83W 83W 83W 83W 83W	19 19 20 21 22				U U U U	T T T T				
83W 83W 83W 83W 83W	23 24 25 26 27	  	62  F	9-65  -55	U Н Н Н	T W W W	2 5 4 15			
			CHAR	LEMONT						
CEA CEB CEB CEB	1 2 3 7 8	CLAYEY SAND UNCONSOLIDATED SAND AND GRAVEL	5  7	10-67	U U U U	T T T T			••	
CEB CEB CEB CEB	10 11 12 24 34	UNCONSOLIDATED SAND AND GRAVEL SAND AND GRAVEL	  +4 	5-46 	υ υ υ	T T T T				
CEW CEW CEW	1 2 3 4 5	SHALY OR SLATY METAMORPHIC FINE GRAIN METAMORPHIC FINE GRAINED	  9 18	11-49 7-51	U T H H	Z H W H	5 4 9 2		16	
CEM CEM CEM	6 10 11 12 13	METAMORPHIC FINE GRAINED UNCONSOLIDATED GPAVELLY SAND	11 29 10 8 15	11-49 12-47 6-50 8-67 -56	H H  U H	W W W T	4 10 4  4			C*
CEM CEM CEM	14 15 16 27 18	SAND	2 1  6	 -46  5-47	U H H C	W W W	 4  8 55	***		
CEW CEW CEW	19 20 21 22 23	GRAVEL	185	9-65 -65 	H C C	₩ ₩ ₩ ₩	1 15  12	45   	4	  C*
CEM CEM CEM	24 25 26 27 28	CLAY GRAVEL	13 18 4	 6-65 -49	H H  C	₩ ₩ ₹ ₩	4 6 1 50			
CEM CEM CEM CEM	29 30 31 32 33	GRAVEL	60 30 30  30	-59 12-66 5-65  7-65	Н Н Н І	W W W	6  5 6 20	140 90 100	10 2 5	
CEW CEW CEW CEW	34 35 36 37 38	GRAVEL	46 2 45  4	7-65 5-65 5-64 	н н н н	W W W W	5 4 30  15	130 120 85	8 10 15	
CEM	39 40				Н	W	8	**	***	C*

TABLE 10. DESCRIPTION OF WELLS AND BORINGS--CONTINUED

LOC WE NUM	LL	LOCATION	ALTI- TUDE OF LSD (FT.)	OWNER	DATE DRILLED (YEAR)	METHOD DRILLED	WELL FINISH	CASING DIAM- ETER (IN.)	WELL DEPTH (FT.)	DEPTH TO CONSOL. ROCK (FT.)	LOG AVAIL- ABLE
				co	LRAIN						
CSA CSA CSA CSA CSB	1 2 3 4 4	423954N0724316.1 424011N0724308.1 424038N0724144.1 424143N0724130.1 424242N0724206.1	525 527 599 619 665	USGS USGS USGS USGS MDPW	1967 1967 1967 1967	8 8 8		4 4 4	57 50 59 39 22	•••	G* G* G* G*
CSB CSB CSB CSB CSB	5 8 10 12 14	424341N0724250-1 423930N0724254-1 423914N0724255-1 423809N0724359-1 423958N0724324-1	722 507 500 455 525	MDPW MDPW MDPW MDPW MDPW	1938  1938 1955 1938		0 0 0 0		23 31 45 22 28		D* D* D*
CSB CSB CSB CSB	16 17 18 19 25	423933N0724405.1 424058N0724505.1 424050N0724458.1 424126N0724532.1 424026N0724309.1	595 725 645 665 555	MDPW NDPW MDPW MDPW MDPW	1936 1938 1938 1936 1938		0 0 0 0	**	31 24 26 17 11		D* D* D* D*
CSB CSW CSW CSW	39 1 2 8 9	424042N0724430.1 423832N0724305.2 423835N0724302.1 423809N0724356.1 423832N0724305.1	645 482 485 460 485	MDPW SHELBURNE FALLS SHELBURNE FALLS USGS SHELBURNE FALLS	1938 1966  1964 1952	 W  B C	0 0 P S S	3 2 1 12	21 40 29 32 42		D* 0 0 6* 0*
CSM CSM CSM	10 11 12 13 14	423830N0724308.1 424012N0724259.1 424018N0724259.1 423912N0724259.1 424219N0724346.1	482 580 560 510 1235	SHELBURNE FALLS CUTTING FRANK A GOOLEY HOWARD STREETER FOSTER DUMAS CHARLES R	1966 1966 1947 1965 1947	W B D C	P X 0  X	2 6 38 6 8	65 45 15 27 162	14 20	D*
CSW CSW CSW CSW	15 16 17 18 19	423932N0723954.1 424030N0724248.1 423922N0724259.1 423856N0723845.1 423829N0724307.1	890 570 505 500 570	SCRANTON DUANE KENDALL CO KENDALL CO GRISWOLDVILLE SHELBURNE FALLS	1964 1940 1940 1963 1966	A C C C	X X S P	.6 6 8 6 2	121 295 298 39 36	45 	  0
CSM CSM CSM	20 21 22 23 24	424013N0724336.1 424026N0724349.1 424019N0724343.1 424211N0724640.1 424032N0724149.1	600 590 575 990 600	TEMPLE HAROLD HERZIG STANLEY HERZIG LEON BOWEN J H CENTRAL SCHOOL	1966 1965 1966 1967 1949	c	X X X X	6 6 6 6	50 50 200 103 165	10 15 11 40 60	
CSM CSM CSM CSM	26 27 28 29 30	424322N0724426.1 424330N0724549.1 424023N0724251.1 424041N0724136.1 423856N0724123.1	1470 1715 600 391 1175	HERZIG CARL TRANOMSKI W J STREETER RALPH COLRAIN FIRE DIST PIKE DAVID	1965 1964 1958	H C	X X 	6 6 6 2 36	85 140 110 45 15	25 15 	
CSW CSW CSW CSW	31 32 33 34 35	424005N0724111.1 424239N7724213.1 424339N0724252.1 424335N0724559.1 424127N0724535.1	969 700 741 1715 729	COLRAIN FIRE DIST KRUGER JOSEPH CROMACK KEMP ELLSWORTH DUNNELL DEAN		D 0 D	X 9 W U	6 36 24 36 42	12 24 33 8	••	
				cc	NWAY						
CWB CWB CWB CWB	1 3 4 6 10	422903N0724513.1 423015N0724451.1 423042N0724438.1 423103N0724357.1 423053N0724138.1	968 814 797 708 522	MDPW MDPW MDPW MDPW MDPW	1938 1940 1958		0 0 0 0	••	14 28 50 32 8		D* D* D* D*
CWB CWW CWW CWW	19 173 174 175 176	423230N0724338.1 423040N0724157.1 423019N0724219.1 423349N0724237.1 423314N0724249.1	603 610 670 600 780	MDPW ROSE EDWIAN A DACY BERTHA RUSH DR LEWIS E MEYER CARL	1938 1965 1964 1964 1966		0 X X X	6 6 6 6	18 100 173 174 200	11 128	D*
CMM CMM CMM CMM	177 178 179 180 181	423241N0724156.1 423241N0724156.2 423033N0724205.1 423041N0724157.1 423040N0724252.1	655 655 595 670 653	HOLE JAMES HOLE JAMES WEEKS JAMES JR KRATT LLOYD L STAELENS RICHARD	1899 1964 1964 1963 1963	D	W X X X	30 6 6 6	16 54 360 85 210	16 22 190 21 75	0
C M M C M M C M M C M M	182 183 194 185 186	423045N0724134.1 423022N0724218.1 423024N0724223.1 423024N0724440.1 423049N0724303.1	550 630 640 875 665	CLARK LYLE D CONWAY GRAMMAR SCI FRENCH NORMAN VAN GELDEN J	1963 + 1939  	C C D		6 10 6 24 36	250 500 85 9 12	54 150 - 	
CWW	187	423031N0724149.1 423232N0724139.1	551 485	BLAKSLIE HAROLO		D D	W W	36	14		0

TABLE 10. DESCRIPTION OF WELLS AND BORINGS--CONTINUED

WE	CAL ELL 18ER	WATER-BEARING MATERIAL  OF  MAJOR AQUIFER	WATER LEVEL (FT.)	DATE WATER LEVEL MEAS.	WATER USE	WELL USE	YIELD (GPM)	DRAW- DOWN (FT.)	PUMPING PERIOD (HOURS)	QW TYPE
.,,		TAGEN AGONER		LRAIN			, , , ,			
CSA CSA CSA CSA CSB	1 2 3 4 4	GRAVELLY SAND GRAVELLY SAND GRAVELLY SAND GRAVELLY SAND UNCONSOLIDATED SAND AND GRAVEL	11 10 10	10-67 10-67 10-67 10-67	υ υ υ	T T T T				alle est de est de est de est de est
CSB CSB CSB CSB	5 8 10 12 14	UNCONSOLIDATED SAND AND GRAVEL UNCONSOLIDATED SAND AND GRAVEL SAND AND GRAVEL UNCONSOLIDATED SAND AND GRAVEL	  5	6-55	U U U U	T T T T				
CSB CSB CSB CSB	16 17 18 19 25	UNCONSOLIDATED SAND AND GRAVEL UNCONSOLIDATED SAND AND GRAVEL UNCONSOLIDATED SAND AND GRAVEL UNCONSOLIDATED SAND AND GRAVEL SAND AND GRAVEL		11-38	טטטט	T T T T				
CSB CSW CSW CSW	39 1 2 8 9	CLAYEY SAND AND GRAVEL SAND AND GRAVEL BOULDERY SAND AND GRAVEL SAND AND GRAVEL BOULDERY SAND AND GRAVEL	2 7 9 23 9	11-38 5-68  12-64 -52	U P P U P	T 0 W 0 W	40	=	50	  p*
CSW CSW CSW CSW	10 11 12 13 14	SAND INTERBEDDED METAMORPHIC FINE GRAINED GRAVEL GRAVEL INTERBEDDED METAMORPHIC FINE GRAINED	12	12-66 12-66  7-65 -47	H H C	Т ₩ ₩ ₩	50 10  12 8		8	C* P* P* M*
CSW CSW CSW CSW	15 16 17 18 19	GRAVEL INTERBEDDED METAMORPHIC FINE GRAINED INTERBEDDED METAMORPHIC FINE GRAINED GRAVEL BOULDERY SAND AND GRAVEL		11-64   -63 1-66	H C C P U	W W W T	10 30 60 70	50  	2	
CSW CSW CSW CSW	20 21 22 23 24	INTERBEDDED METAMORPHIC FINE GRAINED INTERBEDDED METAMORPHIC FINE GRAINED INTERBEDDED METAMORPHIC FINE GRAINED	40 15 9	10-66 -65 10-66 5-67	H S H H T	ine ini ine ini ine	12 15 2 6 6	90	36	  p*
CSW CSW CSW CSW	26 27 28 29 30	SAND AND GRAVEL	70  8 3	5-65  5-68 5-68	Н Н Р Н	H H H	15 7 10 65			
CSM CSM CSM CSM	31 32 33 34 35	METAMORPHIC FINE GRAINED  SAND AND GRAVEL  TILL  SAND AND GRAVEL	2 4 14 16 5	12-68 5-68 5-68 5-68 5-68	U  U  U	0 0 W	.5			
				ONWAY						
CWB CWB CWB CWB	1 3 4 6 10	CLAYEY SAND AND GRAVEL  CLAYEY SAND AND GRAVEL  FINE GRAINED SAND	5 3	1-40 -58	U U U	T T T T				
CWW CWW CWW	19 173 174 175 176	GRAVEL	50 50	8-64 11-64	U H H H	T W W U	7 7 15 3			
C M M C M M C M M C M M C M M	177 178 179 180 181	TILL	10 20 F 24 3	-64 9-64 10-64 9-63 7-63	U S Н Н	O W W	1 35 15 2			C*
CAM CAM CAM CAM	182 183 184 185 186	GRAVEL TILL SAND AND GRAVEL	16  F 1 5	7-63  5-68 5-68	Н Т Н U Н	W W O W				P* C*
CMM	187 188	SAND AND GRAVEL	6	5-68 5-68	H H	W				

TABLE 10. DESCRIPTION OF WELLS AND BORINGS--CONTINUED

L OC WE	LL	LOCATION	ALTI- TUDE OF LSD (FT.)		DATE DRILLED LYEAR)	METHOD DRILLED	WELL FINISH	CASING DIAM- ETER (IN-)	WELL DEPTH (FT.)	DEPTH TO CONSOL. ROCK (FT.)	LOG AVAIL- ABLE
				DEERI	FIELD						
DFA DFA DFA DFA	1 2 3 4 5	423312N0723618.1 423324N0723612.1 423331N0723625.1 423348N0723640.1 423407N0723615.1	140 140 140 140 140	USGS USGS USGS USGS USGS	1967 1967 1967 1967 1967	8 8 8 8		4 4 4	92 70 75 92 89		G* G* G* G*
DFA DFA DFA DFA	6 7 8 9	423320N0723635.1 423220N0723626.1 423207N0723640.1 423144N0723645.1 423208N0723703.1	140 135 139 142 135	USGS USGS USGS USGS USGS	1967 1967 1967 1967 1967	8 8 8 8		4 4 4 4	37 92 37 87 52		G* G* G* G*
DFA DFA DFB DFB	11 12 1 2 43	423117N0723730.1 423058N0723621.1 423136N0723759.1 423408N0723533.1 423035N0723720.1	149 185 145 127 265	USGS USGS MOPW MOPW MDPW	1967 1967 1949	8 8	0 0	4 4 2 2 	52 87 56 28 102	55	G* G* D* D*
DFB DFR DFR DFR	44 45 1 2 3	423119N0723734.1 423136N0723740.1 423047N0723720.1 423054N0723724.1 423132N0723739.1	154 171 184 151 160	MOPW MOPW MOPW MOPW MOPW	1961 1961 1962 1962 1961	 М М	0 0 0 0	2 2 2 2	91 112 67 62 71		D* D* D* D*
DFR DFR DFR DFR	4 5 6 7 8	423202N0723744.1 423215N0723740.1 423221N0723739.1 423245N0723722.1 423251N0723718.1	160 168 297 294 278	MDPW MDPW MDPW MDPW MOPW	1962 1961 1961 1961 1962	W W W W	0 0 0 0	2 2 2 2 2 2	52 22 110 53 37	20	D* O* O* O*
DFR DFR DFR DFR DFR	9 10 11 12 13	423309N0723715.1 423340N0723715.1 423344N0723715.1 423351N0723715.1 423403N0723717.1	186 204 248 150 173	MDPW MDPW MDPW MDPW MDPW	1961 1962 1962 1961 1961	W W W	0 0 0 0	2 2 2 2 2	5 40 101 23 57	94 23	0* 0* 0* 0*
DFR DFW DFW DFW	14 2 30 31 33	423409N0723717.1 423358N0723536.1 423200N0723723.1 423325N0723453.1 423110N0723624.1	189 130 150 380 190	MDPW MCCARTHY MRS J CONSDL CIGAR CO SPRUYGT F J DEERFIELD F D	1961   1950	W D	0 X X G	2 48 6 6 12	52 30 450 124 34	48	D*   D*
DEW DEW DEW DEW	42 44 47 48 49	423206N0723730.1 423310N0723558.1 423406N0723515.1 423401N0723505.1 423403N0723504.1	163 140 250 200 200	HASSAY MICHAEL USGS WARNER BROTHERS WARNER BROTHERS WARNER BROTHERS	1964 1964 1940 1965 1965	8 C	X S X X	6 2 6 6 6	350 28 172 347 100	0 0	G D
DEW DEW DEW DEW DEW	50 51 52 53 54 55	423228N0723534.1 423329N0723732.1 423248N0723624.1 423309N0723603.1 423309N0723605.1 423122N0723741.1	410 310 160 140 140	EAGLE BROOK SCH EMERSON LAWRENCE DEERFIELD ACADEMY DEERFIELD F D DEERFIELD F D DEERFIELD F D	1949 1967 1966 1967 1967	С  W W W	X X P S S	6 6 2 2 2 2 2	315 175 20 26 26 45	108	D*
				FLO	DRIDA						
FUA FUA FUA FUB	1 2 3 4 1	423956N0725917.1 423940N0725842.1 424047N0725920.1 424207N0725704.1 423758N0725830.1	730 T05 760 960 972	USGS USGS USGS MDPW	1967 1967 1967 1967 1955	8 e 8 		4 4 4	19 10 12 10 22		G* G* G* D
FUW FUW FUW FUW	1 2 3 4 5	424135N0730320.1 424150N0730206.1 424140N0730327.1 423934N0730026.1 424140N0730235.1	1890 2018 1930 1765 1942	SWANSON ELLEN T MARTIN J C TUPPER WARREN BOUCHER ROLAND GOMAN JUDSON	1949 1949 1949 1949 1949	0000	X X X X	6 6 6 6	50 55 100 53 106	30 24 14 18 76	D* D* D* D
FUW FUW FUW FUW	6 7 8 11 12	424215N0730154.1 424137N0730144.1 424139N0730142.1 423852N0725959.1 423855N0730001.1	2120 1984 1994 1650 1680	ARIGONI H C DAVIS HAROLD MARTIN JAMES MYAL DONALD J MOREAU LEO A	1951 1951 1950 1952 1952	0000	X X X X	6 6 6 6	96 186 68 200 97	30 15 20 21 20	D D* D*
FUW FUW FUW FUW	13 14 15 16 17	423858N0725918.1 423859N0725925.1 423903N0725937.1 423959N0730046.1 424136N0730217.1	1610 1600 1600 1900 2000	ZAPPUŁLA FRANK PAOLETTI ROMEO HUNKLER STEWART FLORIDA TOWN FLORIDA SCHOOL	1951 1951 1951 1951	C C C	x x x x	6 6 6 6	86 94 54 73 200	27 32 6 13 64	
FUW FUW FUW	18 19 20	424159N0730203.1 424139N0730205.1 424143N0730258.1	2050 2000 1920	CAMPBELL PAUL MARTIN LAWRENCE FOUCHER ROBERT	1963 1963 1966	c 	X X X	6 6 6	115 90 200	17 25 42	

TABLE 10. DESCRIPTION OF WELLS AND BORINGS--CONTINUED

L DC A	L	WATER-BEARING MATERIAL OF MAJOR AQUIFER	WATER LEVEL (FT.)	DATE WATER LEVEL MCAS.	WATER USE	WELL USE	YI ELD (GPM)	DRAW- DOWN (FT.)	PUMPING PERIOD (HOURS)	QW TYPE
			DE	ERFIELD						
DEA DEA DEA DEA DEA	1 2 3 4 5	CLAY GRAVELLY CLAY CLAY CLAY CLAY CLAY	9 10 10 20 25	10-67 10-67 10-67 10-67	U .	T T T T	••			
DFA DFA DFA DFA	6 7 8 9	GRAVELLY SAND CLAYFY SILT OR LOESS FINE GRAINED SAND SILTY SAND	14 6 2 10	10-67 10-67 10-67 10-67	U U U U	T T T T	4-			
DFA DFA DFB DFB DFB	11 12 1 2 43	SANDY SILT OR LOESS COARSE GRAINED SAND FINE GRAINED SILTY SAND COARSE GRAINED SAND AND GRAVEL FINE GRAINED SILTY SAND	16 25 0 17 48	10-67 10-69 8-49  11-61	υ υ υ	T T T T				
OFB OFB OFR OFR OFR	44 45 1 2 3	UNCONSOLIDATED SAND AND GRAVEL SILTY SAND SILT OR LOESS SANDY SILT OR LOESS SAND AND GRAVEL	28 12 	11-61 11-61 1-62 	U U U U	T T T T				
DER DER DER DER DER	4 5 6 7 8	CDARSE GRAINED SAND AND GRAVEL SANDY SILT OR LOESS SILTY SAND SANDY GRAVEL	12 1 30	1-62 11-68  1-62	U U U	T T T T				
DER DER DER DER	9 10 11 12 13	FINE GRAINED SAND AND GRAVEL	7	12-61	บ บ บ บ	T T T T				
DER DEW DEW DEW DEW	14 2 30 31 33	CHERTY OR SILICEOUS  SANDSTONE IGNEOUS, GRANULAR GRAVEL	24 16 13 12	12-61	U N	Т Ы Ы Ы	5 10 163	   9		C*
DEW DEW DEW DEW	42 44 47 48 49	GRAVELLY SANDSTONE SAND AND GRAVEL IGNEOUS, GRANULAR IGNEOUS, GRANULAR IGNEOUS, GRANULAR IGNEOUS, GRANULAR	3 4 38 33 3	-64 12-64  -65 -65	I C	₩ ₩ ₩ ₩	2 126 47 15	155 240 70	24 48	C*
DEW DEW DEW DEW DEW DEW	5 <u>C</u> 51 52 53 54 55	SAND UNCONSOLIDATED SAND AND GRAVEL CLAYEY GRAVEL MEDIUM GRAINED SAND AND GRAVEL	125 165 5  8	-58 4-67 8-66  10-65	U U	W T T T	65 15 50 80 80 50		20  4  6	C* C*
FILE	,			URIDA		Т				
FUA FUA FUA FUB	1 2 3 4 1	=======================================			U U U U	T T T				
FUW FUW FUW FUW	1 2 3 4 5	METAMORPHIC FINE GRAINED	4 3 4 12 6	4-49 5-49 8-49 10-49 5-49	H H H H	W W W W	8 2 3 20 3	6	3	
FUW FUW FUW FUW	6 7 9 11 12	METAMORPHIC FINE GRAINED	5 20 15 1 2	8-51 9-51 9-50 -52 -52	H H H	ы ы ы ы	2 •5 3 3 5			
FUW FUW FUW FUW	13 14 15 16 17	METAMORPHIC FINE GRAINED	12 20 6 2 32	 -51 -51 -51 -51	H H  T	Ы Ы Ы Ы	13 8 9 9			
FUW FUW	18 19 20	METAMORPHIC FINE GRAINED METAMORPHIC FINE GRAINED METAMORPHIC FINE GRAINED	10 0 10	10-63 10-63 11-66	н н	W W	3 10 2	00 00 00 00 00 00		C*

TABLE 10. DESCRIPTION OF WELLS AND BORINGS--CONTINUED

LOC/ WEI	LŁ	LOCATION	ALTI- TUDE OF LSO (FT.)	OWNER	DATE DRILLED (YEAR)	METHOD DRILLED	WELL FINISH	CASING DIAM- ETER (IN.)	WELL DEPTH (FT.)	DEPTH TO CONSOL. ROCK (FT.)	LOG AVAIL- ABLE
				G	REENFIELD	ı					
GRA GRA GRA GRB GRB	1 2 3 1 3	423840N0723641.1 423838N0723543.1 423822N0723528.1 423622N0723625.1 433410N0723534.1	255 321 305 256 106	USGS USGS USGS MDPW MDPW	1967 1967 1967 1951 1931	8 8 8	  0 0	4 4 	60 92 65 67 24	60 91 65 67 24	G* G* G* D*
GRB GRB GRB GRB GRB	7 8 22 35 42	423507N0723647.1 423508N0723646.1 423829N0723439.1 423521N0723753.1 423852N0723347.1	154 168 345 286 349	MOPW MOPW MOPW MOPW MOPW	1955 1955 1955 1950 1961		0 0 0		50 28 31 14 73	50	D* D* D* D*
GRB GRB GRB GRB GRB	43 44 45 45 47	423°422N0723424°1 423701N0723533°1 423651N0723533°1 423653N0723546°1 423636N0723511°1	339 281 280 279 262	MDPW MDPW MOPW MDPW MDPW	1961 1961 1961  1961		0 0 0	2	9 79 55 42 41	9 78 55 43 41	0 * 0 * 0 * 0 *
GRB GRB GRB GRB GRB	48 49 50 51 52	423533N0723708.1 423608N0723656.1 423622N0723647.1 423623N0723645.1 423639N0723615.1	174 158 164 215 253	MDPW MDPW MDPW MDPW MDPW	1961 1961 1961 1962 1961	  B	0 0 0 x 0	2 2 2 2 2	154 49 17 44 24	154 49 17 36 24	D * D * D
GRB GRB GRB GPB	53 54 55 56 57	423641N0723616.1 423646N0723601.1 423649N0723600.1 423635N0723626.1 423419N0723717.1	258 277 274 206 269	MDPW MDPW MDPW MDPW MDPW	1961 1961 1961 1961 1961	8	X 0 X 0	2 2 2 2 2	24 24 52 90 102	6 24 44 89	D D* O* O*
GRB GRB GRB GRB GRR	58 60 61 62	423438N0723720 • 1 423518N072370 • • 1 423509N0723722 • 1 423450N0723717 • 1 423515N0723715 • 1	241 183 188 227 172	MDPW MDPW MDPW MDPW MDPW	1961 1961 1962 1963	   W	0 0 0	2 2 2 2 2	102 152 40 101 183	400 400 400 400 400 400 400 400 500 400	D* O* O* O*
GRR GRR GRR GRR	2 3 4 5 6	42343?NQ723716.1 423524NQ723712.1 423531NQ723705.1 423540NQ723705.1 423544NQ723705.1	276 177 166 155 180	MDPW MDPW MDPW MDPW MDPW	1961	W W W W	0 0 0	2 2 2 2 2	22 104 136 103 78		0* 0* 0* 0*
GRR GRR GRR GRR	7 8 9 10	423547N0723704.1 423552N0723702.1 423604N0723659.1 423616N9723655.1 423447N0723719.1	179 177 157 162 222	MDPW MDPW MDPW MDPW MDPW	1962	W W W W	0 0 0 0	2 2 2 2 2	5 99 27 4 62	5 98 	D * D *
GRR GRR GRR GRR GRR	12 13 14 15 16	423617N0723651.1 423625N0723644.1 423630N0723636.1 423634N0723630.1 423639N0723623.1	217 236 230 221 205	MDPW MDPW MDPW MOPW MDPW		M  M	0 0 0 0	2 2 2 2 2	40 10 40 40	10	0* 0* 0*
GRR GRR GRR GRR	17 18 19 20 21	423637N0723617.1 423706N0723527.1 423715N0723521.1 423719N0723515.1 423729N0723506.1	252 275 287 255 271	MDPW MDPW MDPW MDPW MDPW	1959 1961 1961 1961	 	0 0 0	2 2 2 2 2	16 13 6 12 48	6 12	D D* D* D*
GRR GRR GRR GRR	22 23 24 25 26	423746N0723400.1 423759N0723451.1 423825N0723420.1 423835N0723403.1 423840N0723402.1	317 272 367 381 332	MDPW MDPW MDPW MDPW MDPW	1961 1961 1961 1961 1961		0 0 0	2 2 2 2 2	5 48 50 40 50	5 48  40 50	0* 0* 0*
GRR GRR GRR GRR	27 28 29 30 31	423651N0723543.1 423655N0723531.1 423649N0723531.1 423639N0723515.1 423629N0723459.1	274 281 283 262 264	MOPW MDPW MDPW MDPW MDPW	1961 1961 1961 1961 1961		0 0 0	2 2 2 2 2	20 53 7 58 45	57	D* O* D* D*
GRR GRR GRR GRR	32 33 34 35	423626N0723442.1 423629N0723435.1 423636N0723429.1 423647N0723410.1	268 276 271 273	MDPW MDPW MDPW MDPW	1961 1961 1961 1961		0 0 0	2 2 2 2	58 48 37 34	***	D# D# D#
GRW GRW GRW GRW	1 4 13 16 17	423847N0723712.1 423642N0723446.1 423844N0723401.1 423512N0723739.1 423835N0723359.1	240 275 330 210 375	GREENFIELD TOWN GREENFIELD ICE GREENFIELD TOWN SUNNY FARMS INC PRUELT ARTHUR J	1913 1932 1934 1951 1946	D C V C	 Х Р Х	480 8 2 6 6	27 281 53 165 125	40  55 11	D# D# D#

TABLE 10. DESCRIPTION OF WELLS AND BORINGS--CONTINUED

LOCA WELL NUMB	LL	WATER-BEARING MATERIAL OF MAJOR AQUIFER	WATER LEVEL (FT.)	DATE WATER LEVEL MEAS.	WATER USE	WELL USE	YIELD (GPM)	DRAW- DOWN (FT.)	PUMPING PERIOD (HOURS)	QW TYPE
			GRE	ENFIELD						
GRA GRA GRB GRB	1 2 3 1 3	SILTY SAND SILTY CLAY CLAY SAND AND GRAVEL SAND AND GRAVEL	7 6 17 3 0	10-67 10-67 10-67 +51 +31	υ υ υ	T T T T			  	
GRB GRB GRB GRB GRB	7 8 22 35 42	SILTY SAND AND GRAVEL SANDSTONE FINE GRAINED SAND AND GRAVEL COARSE GRAINED SAND AND GRAVEL	8 21 16  8	4-55 4-55 4-55  3-61	υ υ υ	T T T T				
GRB GRB GRB GRB	43 44 45 46 47	SILTY SAND FINE GRAINED SAND FINE GRAINED SILTY SAND GRAVELLY SILTY SAND	3 1 1 	4-61 4-61 3-61  3-61	U U U	T T T T				
GRB GRB GRB GRB	48 49 50 51 52	SILTY SAND AND GRAVEL	15	8-61	U U U U	T T T T	00 107 104 107 100 100 100 100 100 100			
GRB GRB GRB GRB	53 54 55 56 57	   FINE GRAINED SAND	  2 59	8-61 11-61	υ υ υ υ	T T T T				
GRB GRB GRB GRB GRR	58 60 61 62 1	SILTY CLAY  FINE GRAINED SILTY SAND SILTY SILTY SAND	10 5 21	12-61 1-62 2-68	U U U	T T T T				
GRR GRR GRR GRR	2 3 4 5 6	SILTY SAND AND GRAVEL SILTY SAND AND GRAVEL	  5 14		ט ט ט	T T T T				
GRR GRR GRR GRR GRR	7 8 9 10	SILTY CLAY FINE GRAINED SAND AND GRAVEL	15 5 		U U U U	T T T T	  			
GRR GRR GRR GRR	12 13 14 15	   CLAYEY SAND AND GRAVEL	   6		ט ט ט	T T T T	  			
GRR GRR GRR GRR GRR	17 18 19 20 21	CLAYEY SILTY SAND SILTY SAND MEDIUM GRAINED SAND	0  0 1	12-59 1-61 1-61	υ υ υ	T T T T				
GRR GRR GRR GRR GRR	22 23 24 25 26	FINE GRAINED SAND AND GRAVEL  SILTY SAND AND GRAVEL	+2   2	1-61  2-61	υ υ υ	T T T T				
GRR GRR GRR GPR GRP	27 28 29 30 31	  			υ υ υ	T T T T	  			
GRR GRR GRR GRR	32 33 34 35	  			U U U	T T T		  		
GRW GRW GRW GRW	1 4 13 16 17	REDBED SANDSTONE GRAVEL SANDSTONE SANDSTONE	25 2 +3 30	 -32 1-34 -51 -46	N  N	₩ ₩ Τ ₩	50 70 9 20	12 1 	1	  P* C*

TABLE 10. DESCRIPTION OF WELLS AND BORINGS--CONTINUED

LOC:	LL	LOCATION	ALTI- TUDE OF LSD (FT.)	OWNER	DATE DRILLED (YEAR)	METHOD DRILLED	WELL FINISH	CASING DIAM- ETER (IN.)	WELL DEPTH (FT.)	DEPTH TO CONSOL. ROCK (FT.)	LOG AVAIL- ABLE
180	DER		(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	GREENFIE	ELDCONT	INUED					
GRW	19	423840N0723422.1	330	CREENETELO TOUR	10/7						
GRW	20	423844N0723420.1	330	GREENFIELD TOWN	1947 1947		G	16 16	122 84		D#:
GRW GRW	33	423900N0723347.1 423608N0723749.1	355	GREENFIELD TAP			X		260	53	
GRW	35	423612N0723752.1	190 190	GREENFIELD TOWN	1966 1966	W	P P	2 2	188		D# D#
SR W	2.4	/22/15/1272276							1.0		O,
GRW	36 37	423615N0723759.1 423753N0723708.1	200 200	GREENFIELD TOWN	1966 1966	W	P S	2	94 103		0* 0
GRW	38	423758N0723707.1	200	GREENFIELD TOWN	1966	W	\$	2	95		D#
GR W	40	423753N0723710.1 423801N0723805.1	200 290	GREENFIELD TOWN	1966 1966	W	S	2	128	-	D
		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	2,0	OVERALITED LONG	1,400	W	ρ	2	62		Dk
GRW	41	423803N0723733.1	275	GREENFIELD TOWN	1966	W	Р	2	147		0*
GR W GR W	42	423845N0723630.1 423418N0723646.1	260 245	GREENFIELD TOWN	1966	W	P	2	35 207		0* 0*
GRW	46	423754N0723654.1	200	GREENFIELD TOWN	1966	W	S	2	53	tion can	0*
GRW	45	423800N0723629.1	240	GREENFIELD TOWN	1966	W	Р	2	38		D*
GRH	46	423820N0723703.1	220	GREENFIELD TOWN	1966	W	S	2	111		D*
GRW	47	423821N0723657.1	224	GREENFIELD TOWN	1966	W	S	2	109		D*
GR W GR W	48	423823N0723650.1 423833N0723625.1	229 256	GREENFIELD TOWN	1966 1966	W	S S	2 2	48		D*
GRW	50	423712N0723608.1	220	GREENFIELD TOWN	1966	W	S	2	72		D*
GR W	51	423747N0723516.1	255	GREENFIELD TOWN	1966	W	s	2	115	-	D*
GRW	52	423809N0723522.1	280	GREENFIELD TOWN	1966	W	P	2	83		0*
GR W GR W	53 54	423717N0723602.1 423840N0723426.1	220 330	GREENFIELD TOWN	1966	W	S G	2 16	68 81		D*
GRW	55	423644N0723810.1	235	GREENFIELD TOWN	1958		G		99		0
ch	- /		71.0	AD EEU E1 E1 A TOUR	1055					00	
GR W GR W	56 57	423844N0723422.1 423817N0723742.1	31 0 21 3	GREENFIELD TOWN	1955 1967	W	ρ S	2	45 133	90	D*
GRW	58	423751N0723707.1	197	GREENFIELD TOWN	1957	W	S	2	104		0
GRW GRW	59 60	423755N0723708.1 423757N0723708.1	200 200	GREENFIELD TOWN GREENFIELD TOWN	1967 1967	W W	S S	2 2	96 92		D D
		4231314072310001	2.00	ON ECHT TEED TOWN	1,0,						
GRW GRW	61	423819N0723720.1 423823N0723718.1	220 220	GREENFIELD TOWN GREENFIELD TOWN	1967 1967	W	S S	2	120 117		D* D*
GRW	65	423753N0723708.2	200	GREENFIELD TOWN	1967	Č	\$	8	133	133	0*
					HAWLEY						
HMW	3										
HMM	4	423622N0725453.1 423525N0725620.1	700 1020	GORDON DICK SINSIGALA MIKLA	1951 1964	Н	X X	6	106 125	30	
HMW	5	423421N0725241.1	1.750	THEWER HENRY G	1963		x	6	138	6	
HMW	6	423354N0725705.1	1390	TAYLOR MERTON	1968	Н	X	6	250	4	
					HEATH						
HNW	1	424026N0724912.1	1670	HEATH TOWN	1950	С	v				
HNW	5	424105N0725024.1	1340	BAILEY H C	1966		X X	6 6	145 85	7 14	
HNW	6	424115N0724935.1 424312N0725128.1	1640 1590	DEUTSCH ERWIN TROTTON ARTHUR	1966		X	6	175	20	
HNW	7	424155N0725109.1	1360	HEUBNER FRED	1965		X X	6	300	109	
HNW	8	424146N0725102.1	1560	WREEL AND WICEOR				0	115	25	
HNW	0	424124N0725035.1	1480	VREELAND VICTOR BURRINGTON PAUL	1966 1950	Н.	X X	6	145	10	****
HNW	10	424357N0724900.1	1605	CROWNINGSHIELD		Đ	Ŵ	36	80 10	15	~~
HNW	12	424247N0724932.1 424204N0724937.1	1545 1395	THANE		0	H	24	22		
HNW	13			1111111		υ	0		18		
		424403N0725136.1	1620			D	0	36	6		
					LEYDEN						
LUW	3	423955N0723719.1	715	METELICA JOHN	1950	D	x	72	6	3	
FOM	5	42401990723743.1	735	COBB HARRY	1944	С	Х	6	115	ž	
LUW	6	424035N0723749.1 424037N0723750.1	785 775	MUICA LEWIS	1965 1948	H C	X X	6 8	220	53	
LUW	8	424042N0723644.1	970	HERRON DONALD C	1952		x	8	76 360	36 13	
LUW	9	424202N0723754.1	980	TOWN LEYDEN	1964	A	x		240		
LUW	10	424218N0723728.1	825	MASON N	1963	A	X	6	360 150	4	
LUW	11	423955N0723716.1 424154N0723750.1	690 960	LYMAN K H BAKER DONALD	1961	A	X	8	115	15	
		1213244012313081	700		1968		X	6	260	12	
11.7.				11	MONROE						
M3W M3W	1 2	424319N0725945.1 424352N0725747.1	1760	MONROE PRISON CA		С	X	8	350		
M3W	3	424350N0725745.1	2030 2030	SNOW ELLSWORTH OAKES RICHARD	1944 1960	D D	0 X	48 6	20 80	20 3	
							7	3	00	,	

TABLE 10. DESCRIPTION OF WELLS AND BORINGS--CONTINUED

LOCA WEL	.L	WATER-BEARING MATERIAL OF MAJOR AQUIFER	WATER LEVEL (FT.)	DATE WATER LEVEL MEAS.	WATER USE	WELL USE	YIELD (GPM)	DRAW- DOWN (FT.)	PUMPING PERIOD (HOURS)	QW TYPE
		GR	REENFIEL	DCONTINU	JED					
GRW	19	SANDY GRAVEL	5	6-47	P	W	480	21	12	M×
GRW	20 33	SANDY GRAVEL	12	9-47	P N	W	412	34		
GRW	34	SANDSTONE			U	W T	20			
GRW	35				U	Т				
GRW	36				U	Т				
GR W	37 38	SANDY GRAVEL	+15 +10	9-66 9-66	U U	T	75			P*
GRW	39	MEDIUM GRAINED SAND AND GRAVEL	+15	9-66	Ŭ	Ť	50			P*
GRW	40				U	T				
GRW	41	do qu			U	T				
GR W GR W	42				U	T T				
GRW	44	FINE GRAINED SAND	+10	9-66	Ü	T	25			P*
GRW	45	~=			U	Ť				
GRW	46	SAND AND GRAVEL	7	9-66	U	т	30			P*
GR W GR W	47 48	MEDIUM GRAINED SAND AND GRAVEL MEDIUM GRAINED SAND	6 2	9-66 9-66	U	T T	40 50			 P*
GRW	49	FINE GRAINED SAND AND GRAVEL	18	9-66	Ü	T	50			P*
GRW	50	MEDIUM GRAINED SAND AND GRAVEL	+2	9-66	U	Ť	20			P*
GRW	51	FINE GRAINED SAND AND GRAVEL	+9	9-66	U	Т	3			en -en
GR W GR W	52 53	MEDIUM GRAINED SAND AND GRAVEL	+9	9-66	U U	T T	60			 P*
GRW	54	UNCONSOLIDATED SAND AND GRAVEL				W	1040			C*
GRW	55	UNCONSOLIDATED SAND AND GRAVEL		ages asso		W	200			C*
GRW	56	UNCONSOLIDATED SAND AND GRAVEL	5	6-55	Р	Ţ	75			
GRW	57 58	UNCONSOLIDATED SAND AND GRAVEL UNCONSOLIDATED SAND AND GRAVEL	+2 +16	6-67 6-67	U U	T T	20 65			P*
GRW	59	MEDIUM GRAINED SAND	+9	6-67	Ü	T	30			P*
GRW	60	FINE GRAINED SAND AND GRAVEL	+10	6-67	U	T	60			P*
GR W	61	FINE GRAINED SAND	+1	6-67	U	Ţ	5			P*
GRW	62 65	SAND UNCONSOLIDATED SAND AND GRAVEL	2 +15	6-67 7-67	Ų	Ť	670	52	210	P*
			ш	AWLEY						
			П	ANLLT						
HMW	3	SAND IGNEOUS, GRANULAR	18	5-64	H H	W	35 15		2	
HMW	5	**	13	10-63	H	W	4			
HMW	6	oth rep		40-40	Н	W	1			C*
			н	EATH						
HNW	1	•=	12	-50		W	30			
HNW	4	••	20	8-66	Н	W	6		5 15	
HNW	5		35	8-66	H	W W	6 2		12	
HNW	7		30	8-66	H	H	6		10	
HNW	8		25	8-66	Н	W	3		8	
HNW	9		4	5-68	Н	W	5			C*
HNW	10	TILL TILL	7	5-68	H U	0				
HNW	12	TILL			S	W		alph step		C*
HNW	13	GRAVELLY TILL	3	5-68	н	W				
			LE	YDEN						
		THE COATNET					-			P*
FAM	3 4	INTERBEDDED METAMORPHIC FINE GRAINED INTERBEDDED METAMORPHIC FINE GRAINED	3 7		H S	W W	5 18			P#
LUW	5	INTERBEDDED METAMORPHIC FINE GRAINED	18	3-65	Ī	W	2.5	3	8	P*
FUM	6 8	INTERBEDDED METAMORPHIC FINE GRAINED INTERBEDDED METAMORPHIC FINE GRAINED	14 16		н	U W	2			
			25			Lt	5			wa en
LUW	9	INTERBEDDED METAMORPHIC FINE GRAINED INTERBEDDED METAMORPHIC FINE GRAINED	25 6		P S	W	2			
LUW	11	INTERBEDDED METAMORPHIC FINE GRAINED	5		H H	W	3			C*
LUW	12				н	*	,			
			MO	NROE						
M3W	1				Т	W	5			P*
M3W	2	TILL			H H	W	3			C*
мзы	3				- 11					

TABLE 10. DESCRIPTION OF WELLS AND BORINGS--CONTINUED

LOCA WEI	LL	LOCATION	ALTI- TUDE- OF LSD (FT.)	OWNER	DATE DRILLED (YEAR)	METHOD ORILLED	WELL FINISH	CASING DIAM- ETER (IN.)	WELL DEPTH (FT.)	DEPTH TO CONSOL. ROCK (FT.)	LOG AVAIL- ABLE
					ROWE						
ROW ROW ROW ROW	11 12 13 14 15	424222N0725133.1 424242N0725511.1 424338N0725542.1 424144N0725357.1 424135N0725401.1	1710 1780 1150 1350 1350	CORNISH WILLIAM RAINBOW HILL YANKEE ATOMIC GEROFRER HERBERT RUTH J DAVID	1965 1956 1957 1964 1964	C C	X X X X	6 6 8 6	100 217 300 145 264	36 10 82 10	
ROW ROW ROW ROW	16 17 18 19 20	424020N0725652.1 424220N0725441.1 424128N0725356.1 424207N0725524.3 424101N0725535.1	1445 1520 1385 1620 1280	BENT ROY SCRIVENS FRED STANFORD E E SIBLEY CLIFFORD ANDOGNINI CARL	1964 1963 1965 1964 1964	A  A	X X X X	6 6 6 6	174 105 260 207 114	20 18 179 18 10	
20 W 20 W 20 W 20 W 20 W	21 22 23 24 25	424204N0725524.1 424207N0725404.1 424146N0725403.1 424348N0725310.1 424233N0725447.1	1625 1525 1340 1905 1560	THONG FAY STICKNEY R STETSON WENDELL HAMMOND E WILLIAMS NANCY	1964 1964 1964 1966 1966		X X X X	6 6 6 6	129 368 135 100 220	25 25 15 10 120	
ROW ROW ROW ROW ROW	26 27 28 29 30	424152N0725558.1 424356N0725233.1 424205N0775557.1 424235N0725515.1 424128N0725410.1	1560 1940 1600 1730 1245	COOLIDGE ROSENA SHUMWAY RICHARD ESSERT PAUL MILLER WALTER BJORK WENDELL	1964 1964 1964 1965 1952	  C	X X X X	6 6 6 6	130 117 280 205 118	10 26 25 19 30	
ROW	31	424202N0725525.1	1625	SIBLEY CLIFFORD	1957	С	x	6	127	30	400 400
					SAVOY						
SFB SFW SFW	21 1 3 6	423409N0730211.1 423801N0730238.1 423657N0730000.1 423410N0725944.1	1757 1998 1668 1910	MDPW LAPARDO MICHAEL ZOLLO F J SAVOY SCHOOL 7	1959 1949 1949	c c c	0 X X	6 6 6	4 111 80 45	16 2	D
				:	SHELBURNE						
SKB SKB SKW SKW SKW	1 17 2 10 11	423505N0724206.1 423523N0724124.1 423434N0724140.1 423552N0724114.1 423702N0724019.1	550 605 700 935 875	MDPW MDPW WELLS F E & F W GARDINER FRIEND J B	1950 1950 1924 1966 1951	 D A C	0 W X X		14 9 12 260 203	14 10  100 5	D D 
2KM 2KM 2KM 2KM	12 13 14 15	433702N0724018.2 423505N0724132.1 423607N0724110.1 423456N0724152.1 423556N0724114.1	875 600 1000 580 935	FRIEND J B VANGWILDER GEORGE STREETER RICHARD SHIPPEE JOHN HELBIC R C	1818 1967 1967 1965 1860	0   D	X X X W	72 6 6 6 6	22 300 210 160 26	3 17 128 33	***
SKW SKW SKW SKW	17 18 19 20 21	423544N0724131.1 423605N0724056.1 423540N0724055.1 423739N0724125.1 423736N0724113.1	800 940 720 1205 1110	HOUGHTON T WILLIAMS FRANK ANCHORAGE HOME REYNOLDS STANLEY REYNOLDS STANLEY	1962 1945 1965 1947 1945	A C A C	X X X X	6 6 6 6	174 167 500 100 145	105 4 80 30	
SKW SKW SKW SKW	22 23 24 25 26	423556N0724114.2 423555N0724116.1 423726N0723939.1 423457N0724147.1 423504N0724237.1	935 930 960 600 530	HELBIC R C HELBIC R C VALLEY VIEW FARM WISHART ROBERT BARNARD EDWARD	1966  1967  1964	0	X W X X	6 48 6 6	175 15 260 96 200	26  8 5 46	
SKW SKW SKW SKW	27 28 29 30 31	423718N0724357.1 423718N0724759.1 423717N0724404.1 423717N0724406.1 423717N0724407.1	550 520 440 430 430	SHELBURNE FALLS SHELBURNE FALLS SHFLBURNE FALLS SHFLBURNE FALLS SHFLBURNE FALLS	1966 1966 1966 1966 1966	M M M	P P P P	2 2 2 2 2	23 24 16 15	25 18 18 14	D D D D
SKW	32 34	423453N0724115.1 423510N0724124.1	490 535	BATES AVERY NICHOLS ROBERT		D 	 x		20	80	

TABLE 10. DESCRIPTION OF WELLS AND BORINGS--CONTINUED

LOCA WEL NUMA	LL	WATER-BEARING MATERIAL  OF  MAJOR AQUIFER	WATER LEVEL (FT.)	DATE WATER LEVEL MEAS.	WATER USE	WELL USE	YIELD (GPM)	DRAW- DOWN (FT.)	PUMPING PERIOD (HOURS)	QW TYPE
				ROWE						
30W ROW ROW ROW ROW	11 12 13 14 15		20  8 10	7-65  4-64 10-64	H C H H	W W W W	5 7 8 5 2	90  125 200	1  10 2	P* P* C*
ROW ROW ROW ROW ROW	16 17 18 19 20	   	40 8 40 10 30	10-64 12-63 6-65 4-64 4-64	H H H	W W W W	3 5 4 2 5	100 90  200 114	1 2  20 10	
ROW ROW ROW ROW	21 22 23 24 25	   	10 40 15 25 10	4-64 4-64 8-66 8-66	H H H H	₩ ₩ ₩ ₩	3 1 30 5 20	100 300 80	20 30 20	
RÓW ROW ROW ROW	26 27 28 29 30	   	10 40 12 60 4	4-64 10-64 10-64 7-65 -52	H H H H	₩ ₩ ₩ ₩	4 7 2 2 8	100 100 250 200	20 1 2 1 	
ROW	31	<del></del>	8	-57 SAVOY	Н	W	2			C*
SFB SFW SFW	21 1 3 6	SAND METAMORPHIC FINE GRAINED METAMORPHIC FINE GRAINED	2 11 20	3-59 10-49 9-49	U H H P	T W W	8 14 5	2	168	  P*
			SHE	LBURNE						
SKB SKB SKW SKW	1 17 2 10 11	TILL INTERBEDDED METAMORPHIC FINE GRAINEI	   10		U H H H	Т Т W W	  9 5			
SKW SKW SKW SKW	12 13 14 15	INTERBEDDED METAMORPHIC FINE GRAINEI INTERBEDDED METAMORPHIC FINE GRAINEI INTERBEDDED METAMORPHIC FINE GRAINEI INTERBEDDED METAMORPHIC FINE GRAINEI TILL	290	3-67  8-65	H H H H	₩ ₩ ₩ ₩	5 20 7	20	  4	P*   P*
SKW SKW SKW SKW	17 18 19 20 21	INTERBEDDED METAMORPHIC FINE GRAINEI	15 27 7	-62 -45 -65 -47 -45	H S T S	W W W W	5 5 4 25			P*
\$KW \$KW \$KW \$KW \$KW	22 23 24 25 26	INTERBEDDED METAMORPHIC FINE GRAINEI UNCONSOLIDATED SEDIMENT INTERBEDDED METAMORPHIC FINE GRAINEI INTERBEDDED METAMORPHIC FINE GRAINEI INTERBEDDED METAMORPHIC FINE GRAINEI	3 15	-66  7-67 	H I H H	W W W W	7  2	100	B	
SKW SKW SKW SKW	27 28 29 30 31	BOULDERY SAND AND GRAVEL CLAYEY SAND AND GRAVEL	7 8  	1-66 1-66 	U U U	T T T T				
SKW	32 34	TILL			U H	W				C*

		Depth	:		Depth	:		Depth
ASHFIELD 2.	_	110	: BUCKLAND B1.	^	2	: CHARLEMONT B11.	•	0
Gravel	0	-110	: Topsoil		- 1 - 2	: Coarse, dirty sand, loose		- 8 - 10
ASHFIELD Al.			: Clayey silt, medium compact		- 10	: Coarse sand, firm		- 19
Very fine sand, brown	0	- 12	:			: Sand and very little fine		
Fine to medium sand, some gravel to 3/8 inch	12	- 17	: BUCKLAND B2. : Sandy topsoil	0	- 1	gravel, hard, compact	19	- 25
Fine to medium sand, some	33.	- 41	: Coarse sand, firm			: CHARLEMONT B12.		
gravel to 1 inch		- 29	: Coarse sand and gravel, hard			: Coarse sand and gravel and		
Coarse sand and gravel Sandy pebbly clay, dark		- 31 - 43	: Sharp sand, firm	13.	5 - 18	: boulders, firm: : Fine sand and mica, little	0	- 3
bandy perbity ciay, dara		- 43	gravel, hard	18	- 26	: fine gravel and clay, loose	3	- 18
ASHFIELD A2.			:			: Medium sand and gravel, hard	18	- 25
Medium to coarse gravel, some boulders, gray	0	- 12	: BUCKLAND B4. : Coarse sand and gravel, hard	0	- 2.5	: Coarse sand and gravel, clay,	25	- 29
Fine to medium sand, some silt		- 21	: Fine sand, firm		5 - 11.5		_/	at 29
Gravel		- 23	: Fine sand and little fine		e al e	:		
Very fine to medium sand  Medium to coarse sand		- 37 - 45	: gravel, hard					
Very fine to fine sand		- 47	:			: boulders, hard	0	- 10
Fine to medium sand, brown	47	- 97	: BUCKLAND B7.	^	2	: Refusal, ledge or boulder		at 10
ASHFIELD A3.			: Topsoil	0	- 3	: COLRAIN 8.		
Fine to medium sand and gravel	0	- 7	: medium gravel and boulders	3	- 6	: Medium sand and fine to medium		
Sand grading to clay, silt	7	- 12	: Fine sand and some silt,	,	2.0	gravel, moderately rounded	0	- 2.5
Very fine sand and silt		- 43 - 45	: compact		- 10 - 17	: Very fine sand, some coarse : gravel and cobbles	2	5 - 32.5
Fine to medium sand		- 64	: Fine sand, some silt, trace		-1	:		) - 3= - )
ACTION D. D.O.			: of fine gravel, compact	17	- 20	: COLRAIN 9.		
ASHFIELD B12. Sand and scattered gravel,			: BUCKLAND B8.			: Topsoil	0	- 2
loose	0	- 2	Fine sand and some silt, loose	0	- 7	boulders	2	- 27
Clay, sand	2	- 8	: Gravel, loose	7	- 12	: Fine sand		- 35
Sandy clay, scattered gravel	8	- 14 at 14	: Fine sand, silt, and gravel,	12	- 17	: Coarse gravel and large	35	- 42
Z,C.T.W.G.T. 1		a 0 14	: compact	12	- 17	: boulders	3)	- 42
BERNARDSTON B1.		,	: CHARLEMONT 3.			: COLRAIN 10.		
Sand and gravel	0	- 6 - 15	: Till		- 21	: Topsoil	0	- 3
Sand and gravel, trace of	0	- 1)	: Shale		- 54	gravel	3	- 10
clay, compact		- 22	:			: Coarse sand and gravel,		
Fine sand, trace of clay Sand and gravel, some clay,	55	- 72	: CHARLEMONT 4. : Sand and gravel	0	- 54	: boulders, trace of clay: : Coarse and fine sand, traces	10	- 30
compact	72	- 75	· band and Blavez.	Ŭ	- )-	of gravel	30	- 35
DIVERTE AND O			: CHARLEMONT 12.	^	_	: Coarse sand and gravel,	2.5	
BUCKLAND 8.  Fine sand and silt, alluvium	0	- 5	: Fine silt, brown	0	- 5 - 10	: streaks of fine sand		<b>-</b> 50 <b>-</b> 65
Coarse gravel and boulders	5	- 10	: Sand and gravel	10	- 20	:	,~	~/
Clay, light gray	10	- 30	: Medium to coarse sand, some	00	05	: COLRAIN A1.	_	-
Silty gray clay and clayey silt	30	- 60	: silt and gravel	20	<del>-</del> 25	: Fine silt and sand		- 5 - 9
Till	-	- 67	: fine sand and silt, minor			: Coarse sand and gravel	9	- 16
O CHA TANKIN			: clay, l inch gravel lenses		- 35	: Sandy clay		- 24
Boulders, sand and gravel	0	- 10	: Fine sandy silt, brown	37	- 40	: Sand, clay lenses	C4	- 27
Silt and fine to medium sand,			: some 1 inch pea gravel lenses.	40	- 55	gravel	27	- 37
medium to coarse sand lenses	30	- 20	CHARITMONT AL			: Fine to medium sand, some	37	- 53
Silt and fine to medium sand,	10	- 20	: CHARLEMONT Al.	0	- 1	: gravel		<b>-</b> 56
dirty brown	-	- 62	: Fine to medium sand, light	4		: Fine silty sand and clay,		
Schist	62	- 64	: brown	ാ	- 9 - 14	: very tight	56	- 57
BUCKLAND 23.			: Clay, gray	14	- 37	COLRAIN A2.		
Fine to medium coarse sand and		10	: Silt, gray		- 47	: Fine sandy silt	0	- 4
Sand and gravel, hard	12	- 12 - 23	: Very fine sand grading to fine : to medium sand	47	- 92	: Coarse gravel and boulders : Medium to coarse sand and	4	- 12
Silty clay, some gravel		- 44	·	.,	)_	gravel, thin clay beds	12	- 49
DIMINITARID AND			: CHARLEMONT B3.			: Sandy, silty clay	49	- 50
BUCKLAND Al. Sandy silt	0	- 10	: Sand and gravel, loamy	0	<b>-</b> 3	: COLRAIN A3.		
Medium sand and gravel		- 14	: Coarse sand, firm	9	- 11	: Fine sand and silt	. 0	- 3
Clay and silt, gray	14	- 60	: Coarse sand and gravel,	7.7	2).	: Coarse gravel	3	- 9
Silt and sand, sandier toward bottom	60	- 79	: little clay	11	- 14	: Medium to coarse sand and : gravel, brown	Q	- 32
Refusal	-	at 79	: gray		- 16	: Coarse sand and gravel	32	<b>-</b> 59
DUGIS 177 10			: Sand and gravel, hard, cemented.	16	- 21	: gozpany ak		
BUCKLAND A2. Alluvium.	0	- 2	: CHARLEMONT B7.			COLRAIN A4.	0	- 5
Coarse gravel and cobbles	_	- 10	Coarse sand and gravel, dirty	Θ	- 1	: Sand and gravel		- 30
Silt and clay, gray		- 22	: Sharp sand, firm, yellow	1	- 8	: Clay, sand and gravel	30	- 32
Fine silty sand, gray	22	- 97	: Coarse sand and gravel, cemented : Refusal	8	- 10 at 10	: Rotten rocky till, angular, : very coarse fragments	32	- 39
BUCKLAND A3.			:			:		37
Topsoil and sand	0	- 2 h	: CHARLEMONT B8.	^	0	: COLRAIN B4.	0	0
Gravel and boulders	2	- 4	: Fine sand and fill, loose : Coarse sand and gravel,	0	- 8	: Coarse sand, loose	0	- 2
Boulders	6	- 8	: boulders, firm	8	- 17.5	: hard	, 2	- 14
Sand, some fine clay layers	8	- 23	: Sharp sand and little fine	7.07	5 Ol:	: Coarse sand and gravel, hard	14	- 22
Gravel	23 24	- 24 - 28	: gravel, loose	II.	> - 24	: Refusal		at 22
Tight clay, blue	-	- 29	gravel, compact	24	- 35	COLRAIN B5.		
Refusal		at 29	: Fine sand and gravel, hard,			: Coarse sand, gravel, boulders,		2
BUCKLAND A4.			: little clay, few boulders	35	- 40	: loose	0	- 3
Alluvium	0	- 2	: CHARLEMONT BlO.			cemented, hard	3	- 11.8
		7.7		-	Г			
Coarse gravel and boulders		- 11	: Sand and gravel, loose	0	<b>⇒</b> 5	: Sand, fine gravel, hard, compact		, - 20
Coarse gravel and boulders  Silty clay  Tight sand and clay	11	- 11 - 20 - 21	: Very fine sand, some clay, compact	5	<b>-</b> 15	: Sand, little fine gravel, compact cemented, hard		- 22.5

	Depth	:		Depth	:	Depth
COLRAIN B8.		: DEERFIELD 33.			: DEERFIELD A12.	
Coarse sand, loose	0 - 5	: Sandy clay, hard	0	- 8	: Silty clay, gray	0 - 8
Coarse sand and gravel, hard	5 - 15	: Mud, dirty		- 11	: Fine sandy silt	8 - 9
Coarse sand, firm		Sand and little gravel, dirty	11	- 19	: Silty clay, gray	9 ~ 18
Coarse sand and gravel, hard	18 - 31	Sand, gravel, and boulders, dirty	19	- 28	: Sandy silt	
COLRAIN BLO.		: Coarse sand and gravel, dirty		- 33	: Medium to coarse sand, red	
Coarse sand, loose	0 - 2	: Fine sand, clay, and boulders	33	- 34	1	
Coarse sand and gravel, hard	2 - 45	· Dunnaman ch			: DEERFIELD B1 (North bank).	
COLRAIN B12.		: DEERFIELD 54. : Fine to medium brown sand,			: Sand and gravel : Bedrock	0 - 0.6 at .6
Coarse sand and gravel	0 - 7	trace of clay	0	- 21	:	
Coarse sand and gravel, loose	7 - 17	: Fine to medium gray gravel,			: DEERFIELD B1 (South bank).	
Sand and gravel, compact		trace of clay		- 32	: Silty sand and gravel	
Refusal	at 22	Fine gray silt, some clay	32	<b>~</b> 44	: Silt, compact	
COLRAIN B14.		: DEERFIELD 55.			: Very fine sand, trace of clay,	100)
Coarse sand and gravel		Topsoil	0	- 3	: compact	
Fine sand, firm, yellow		Coarse sand and gravel	3	- 15	: Fine sand, compact	38.3 - 47.2
Sand and gravel, hard, compact	2) = 20	: Medium to fine sand and gravel : Coarse sand, fine sand, streaks	7.2	- 25	: Fine sand, gravel, rocks and : some clay	47.2 - 55.5
COLRAIN B16.		of clay and bits of gravel	25	-100	: Rock obstruction	
Coarse sand, dirty	0 - 5	:			:	
Coarse sand and gravel, firm		DEERFIELD Al.	^	- 4	: DEERFIELD B2.	0 01
Medium coarse sand and gravel,	9.5 - 20	: Topsoil and silty clay	0	- 7	: Fine sand, loose, gray	
firm	26 - 31	: Sand and gravel	7	- 10	: Coarse sand and gravel, hard	
GOV DATE: DO		Medium sand	10	- 12	:	
Coerse send and gravel houlders	0 - 7	: Clay, saturated, slightly drier	10	- 02	: DEERFIELD B43.	
Coarse sand and gravel, boulders.  Fine sand, compact, hard	7 - 21	near bottom	12	- 92	: Medium silt and fine sand, : loose	0 - 1.5
Sand, very little fine gravel,		DEERFIELD A2.			: Silt, trace of fine sand and	
cemented, hard	21 - 24	Topsoil		- 1	: clay, hard	1.5 - 13.0
COLRAIN B18.		Fine clayey silt, brown		- 24 - 45	: Silt, some fine sand, hard, brown	13.0 - 23.0
Sand and gravel fill, loose	0 - 4.5	: Clay, gray	24	- 47	: Fine sand and trace of silt,	13.0 - 23.0
Fine sand and gravel, hard		: lenses, faint red color			: compact	23.0 - 52.0
Fine sand, compact		below 45 ft			: Silt and trace of clay and	50 A 303 F
Sand, gravel, clay, hard	51.7 - 52.5	: Sandy clay, red, hard, dense	69	- 10	: fine sand	52.0 -101.5
COLRAIN B19.		DEERFIELD A3.			: DEERFIELD B44.	
Sand and gravel, boulders	0 - 6	Fine sand and silt		- 10	: Fine sand, trace of silt and	
Sand and gravel, hard	6 - 14.5	Fine sandy silt	10	- 16	mica, loose, brown	0 - 5.5
Sand and fine gravel, cemented, hard	14.5 - 17	: Fine silt, brown, thin gravel : lens at 16 ft	16	- 22	: Fine sand, loose, gray-brown : Coarse to fine sand and gravel,	5.5 - 9.0
Refusal	at 17	Clay, gray		- 75	: some cobble, compact, brown	9.0 - 15.5
					: Fine sand, trace of mica,	10 -
COLRAIN B25.	0 - 8 5	Eine odlit - icaccous brown	0	- 17	: compact	15.5 - 48.5
Coarse sand and gravel, hard Sand and gravel, cemented, hard	0 <b>-</b> 8.5 :	: Fine silt, micaceous, brown : Coarse gravely sand, brown		- 17 - 25	: Coarse to fine sand, trace of : fine gravel, compact, gray	
Refusal	at 11	: Clay, very little silt, gray,	_,		to brown	48.5 - 53.5
	:	saturated	25	- 77	: Medium to fine sand, compact	53.5 - 55.0
COLRAIN B39.  Coarse sand and gravel, boulders,		: DEERFIELD A5.			: Fine sand, trace of silt and : mica, compact, gray to brown	55 0 - 70 5
hard	0 - 7	Fine micaceous silt, brown	0	- 12	: Coarse to fine sand, trace of	77.0 - 19.7
Sand and gravel, a little clay,		: Fine silty sand, gray to brown		- 17	: fine gravel, brown, compact	79.5 - 91.0
cemented, hard	7 - 21	Medium to coarse sand, finer	7.07	l <sub>1</sub> O	· properties plus	
CONWAY B1.		at depth		- 42 - 88	: DEERFIELD B45. : Topsoil, some silt and fine sand	0 - 2
Coarse sand and boulder fill,		Clay, dense, red		- 89	: Coarse to fine sand and gravel,	_
loose, dirty	0 - 1.5				trace of silt, compact, brown.	2 - 8.5
Fine sand, little clay, gravel		Eine Tieses Silt brown	0	- 18	: Fine sand, trace of silt, compact, gray	8.5 - 16.7
and mica, soft		Fine micaceous silt, brown Gravel and coarse sand		- 30	: Coarse gravel, very compact	
,,,		Clay, gray		- 37	: Fine sand, compact, gray-brown	
CONWAY B3.					: Medium to fine sand, trace of	00 0 00 0
Loamy sand, soft	0 - 3	: DEERFIELD A7. : Fine micaceous silt	0	- 6	: silt, compact, brownish-gray : Medium to fine sand, some silt,	90.0 - 99.0
Fine sand and clay, firm, yellow.	4 - 24	Coarse sand and gravel		- 12	: compact, brown	99.0 -103
Medium sand, coarse gravel,	01 00	Clayey silt	12	- 75	: Silt, trace of fine sand, hard	303
little clay, hard Ledge or boulders	24 - 28 :	Fine sand		- 85 - 92	gray-brown	103 -111.5
Deage of Doutaels	a, 0 20	: Fine sandy silt, rounded pebbles	0)	72	: DEERFIELD R1.	
CONWAY B4.		DEERFIELD A8.			: Topsoil and sandy silt, brown	0 - 2
Loamy sand	0 - 5 :	Silt and fine sand, brown	0	- 9	: Coarse to fine sand and some	2 10
Fine sand, loose, blue, very	5 - 31	Coarse sand and gravel  Micaceous silt and fine sand,	9	- 12	: gravel, compact	2 - 10
Fine sand, firm, very little clay		gray	12	- 37	compact, gray	10 - 17.5
Sand, little fine gravel and					: Medium silt and trace of fine	
clay, hard, compact	42 - 50	Eine miceceous silt brown	0	- 11	: sand	17.5 - 65.0
CONWAY B6.		: Fine micaceous silt, brown : Medium to coarse gravel, brown		- 21	trace of silt, dense,	
Fine sand and little fine gravel,		Silt and fine sand, gray		- 87	: cemented, dark red	65.0 - 66.5
firm	0 - 8 :				Dame Fee D	
Fine sand and little clay, blue. Fine sand, firm	8 - 11.5	: DEERFIELD AlO. : Fine micaceous sand and silt,			: DEERFIELD R2. : Topsoil and silt	0 - 2
Refusal	at 31.5	brown	0	- 5	: Fine sand, trace of silt, loose,	_
		Very coarse sand and gravel,			: gray	2 - 13
CONWAY BIO.	0	to ½ in	5	- 32	: Silt and fine sand, gray	13 - 61.5
Fine gravel	0 - 2	Fine to medium sand, gray	h	- 42 - 44	: DEERFIELD R3.	
THE BLUTCH		Fine to medium sand, scattered	This	, ,	: Topsoil and fine sand and silt	0 - 2.5
CONWAY B19.		gravel, gray	44	- 52	: Silt, trace of fine sand	2.5 - 6.3
Loam	0 - 1.5				: Coarse to fine gravel and	63-100
Coarse sand and gravel, boulders,	1.5 - 5.8	: DEERFIELD All. : Sandy silt, brown	0	- 10	: medium to fine sand	
Sand, gravel and clay, hard	5.8 - 13	Coarse gravel		- 15	: Coarse to fine sand, some	
Fine sand, clay and a little		: Coarse sand	15	- 20	: medium to fine gravel	
gravel	13 - 17.5	Sandy silt	20	- 52	: Fine sand, compact, brown	29.0 - 71.5

***************************************	Depth	:	Depth		Depth
DEERFIELD R4.		: DEERFIELD R14.		: GREENFIELD 20 (Continued).	
Fine to medium sand, loose, gray.	0 - 12	: Silt, organic matter		: Coarse sand	
Coarse to fine sand, some coarse to fine gravel, brown	12 - 35	<ul><li>Medium to fine sand and gravel.</li><li>Fine sand, trace of silt,</li></ul>	1.5 - 3.5	: Gravel and boulders	44 - 84
Silty clay	35 - 51.5	trace of fine gravel	3.5 - 7	: GREENFIELD 34.	
DEERFIELD R5.		: Medium to fine sand, some : medium to fine gravel, trace		: Fine sand, brown	0 - 17
Topsoil and silt	0 - 1	: of silt	7 - 24	: Clay, gray to blue	28 -187
Fine sand and silt, gray	1 - 10.8	: Coarse to fine sand, trace of silt	24 - 30	Sand and clay	187 -188
Siltstone, dark gray		: Coarse to fine sand, some	24 - 30	: CREENFIELD 35.	
Refusal	at 21.5	: coarse to fine gravel	30 - 34	: Fine sand, medium brown	0 - 7
DEERFIELD R6.		: Fine sand and silt, trace of clay	34 - 45	: Fine sand, brown	7 - 17
Topsoil	0 - 1	: Fine sand, trace of silt		: Clay, bluish gray	
Fine sand, trace of gravel	1 - 5 5 - 11	: Fine sand, some silt, trace	49 - 52.5	Fine sand and clay	173 -176
Coarse to fine sand and gravel  Fine sand, some medium sand,	) - 11	of clay	49 = 52.5	: GREENFIELD 38.	
silt and clay		: FLORIDA 1.		: Coarse gravel	0 - 7
Silt, some clay, gray	70 - 75.5	: Hardpan and boulders		: Very fine sand, silty, gray	7 - 37
varved	75.5 - 80	:	30 70	: Very fine sand, gray	
Coarse to fine sand, medium to		: FLORIDA 2.	م مار د	: Clay, gray	
fine gravel, silt, cemented, some cobble (till)	80 - 95	: Hardpan and boulders	- 1	: Fine sand, brown	92 - 95
Fine sand, red, dense, dry		:	,	: GREENFIELD 40.	
Till, clayey silt, fine sand,	105 _110	: FLORIDA 3.	0 - 12 5	: Fine sand, brown	0 - 20
dense, cemented	105 -110	: Hardpan and boulders		: Very fine sand, brown	
DEERFIELD R7.		:		:	
Topsoil	0 - 1	: FLORIDA 5. : Hardpan and boulders	0 - 76	: GREENFIELD 41. : Coarse sand and gravel,	
to medium gravel, compact	1 - 25	Shale, black		brown	0 - 8
Fine sand, some silt, compact		:		: Fine sand, medium brown	8 - 18
Coarse to fine sand, medium compact	36 - 40	: FLORIDA 7. : Hardpan	0 - 15	: Fine sand, brown	
Coarse to fine sand, trace of	,,,	: Shale		: Silt and clay	
gravel	40 - 45	Granite	140 -186	: Very fine sand, gray	120 -147
Fine sand, trace of silt	45 - 52.5	: FLORIDA 8.		: GREENFIELD 42.	
DEERFIELD R8.		: Hardpan and boulders with		: Coarse sand and gravel,	
Fine to medium sand, some medium	0 - 1	: gravel		: brown	0 - 10
gravel	1 - 24	: Schist, gray	20 - 00	: Silt, brown	
Fine to medium sand, some coarse	al 0=	: FLORIDA Al.		: Gravel, sandy, red	32 - 35
sand, compact	24 - 27	: Topsoil and silt	0 - 3	: GREENFIELD 43.	
medium brown	27 - 34	: mixed	3 - 11	: Very fine sand	0 - 30
Silt, some clay, trace of fine	2h 26 5	: Silt, clayey	11 - 18	: Silt, brown	30 - 62
sand	34 - 36.5	<ul><li>Coarse gravel</li><li>Cobble, closely packed, refusal.</li></ul>	18 - 19 at 19	: Clay, gray	62 -207 at 207
DEERFIELD R9.		•		:	
Coarse sand, some medium to fine gravel	0 - 2	: FLORIDA A2. : Topsoil, silty	0 - 2	: GREENFIELD 44. : Coarse gravel, brown	0 - 8
Silt and some medium to fine		Silt, sandy	2 - 9	: Clay, gray	8 - 46
sand	the second secon	Cobble, large, closely packed	9 - 10	: Fine to medium sand,	1.6 52
Arkose conglomerate, red	at 5	Refusal	at 10	: gray:	46 - 53 at 53
DEERFIELD RLO.		: FLORIDA A3.		:	, ,
Fine to coarse sand, loose	0 - 6.5 6.5 <b>-</b> 16.5	Topsoil, silty	0 - 1	: GREENFIELD 45. : Coarse gravel	0 - 10
Fine sand, silt, some clay,		Coarse cobble, closely packed		: Clay, gray	10 - 21
hardpan	16.5 - 40.0	Refusal	at 12	: Hardpan, red	
DEERFIELD R11.		: FLORIDA A4.		: Refusal	at 38
Fine sand, some medium sand,		Coarse sand	0 - 5	: GREENFIELD 46.	
trace of silt at depth, loose.  Fine sand, some silt	0 <b>-</b> 35 35 <b>-</b> 45	: Medium gravel	5 - 8 8 - 10	: Coarse gravel, brown	0 - 10
Fine sand, some silt, trace of	37 - 47	: comple, large, orginally packed	0 - 10	: Fine sand and clay, brown	33 - 47
clay	45 - 50	GREENFIELD 4.		: Fine sand, gray	47 - 54
Silt and clay, trace of fine sand, gray	50 - 80	Sand	~0 <b>-</b> 6	: Fine sand and clay, gray	54 <b>~</b> 68 68 <b>~</b> 84
Silt, sand and gravel, red,		: Sandstone, some coarse, with		: Silt and clay, gray	84 -110
cemented (till)	80 - 94 94 -101	pebbles	46 -281	: Sand and gravel	
Decomposed sandstone, red	94 -101	GREENFIELD 13.		: Refusal	at 111
DEERFIELD R12.		Fine sand and clay	0 - 7	: GREENFIELD 47.	
Topsoil and silt	0 - 2	Hardpan	7 - 8 8 - 48	: Coarse gravel, brown	0 - 10
silt, brown	2 - 7	Clay and fine sand	1	: Fine sand, brown	
Muck and decayed wood	7 - 12			: Fine sand, brown, and	
Coarse to fine sand, some fine gravel	12 - 16	GREENFIELD 17. Topsoil, sand and gravel	0 - 11	: clay	39 <b>-</b> 52 <b>-</b> 97
Silt and clay, varved, gray	16 - 19	Sandstone, red		: Medium to coarse gravel,	
Decayed sandstone	19 - 23 at 23	COPPRETEIN 30		: gray	
A. C. A. C.	av 2)	GREENFIELD 19. Topsoil	0 - 2.5	: Sand and gravel, gray	103 -109 at 109
DEERFIELD R13.	0	Gravel	2.5 - 5.5		
Silt, trace of fine sand	0 - 2 2 - 8	Clay, blue		: GREENFIELD 48. : Coarse gravel, brown	0 - 14
Clay, some silt, soft,		Gravel, black		: Fine sand, brown	1 0
gray	8 - 14	Gravel, yellow		: Fine to medium sand,	18 " 05
Coarse to fine sand and gravel, trace of silt,		Sand and gravel	76 -123	: brown	18 - 25 - 32
dense	14 - 23	GREENFIELD 20.		: Fine sand, brown	32 - 40
Coarse to fine sand, some	23 - 29	Topsoil	0 - 2	: Sand and clay, gray	
fine gravel, compact	23 - 28	Sand and gravel	2 - 16 16 - 23	: Clay, gray: : Fine sand, gray	47 <b>-</b> 80 <b>-</b> 92
	-0	-			
fine sand, hard	28 - 56.5	Gravel, mixed with sand and boulders	23 - 40	: Coarse sand, slate : colored	92 - 98

Depth	: Depth	: De	pth
GREENFIELD 49.	: : GREENFIELD A2 (Continued).	: : CREENFIELD B48.	
Coarse gravel, brown 0 - 14	Clay, gray 30 - 72		- 6
Clay and gravel 14 - 23	Fine to medium sand, gray 72 - 89		- 13
Fine sand, brown	: Clay, gray89 - 91		-148
Medium coarse sand, brown 30 - 45 Medium coarse gravel, brown 45 - 48	: Arkose, red 91 - 92	· · · · · · · · · · · · · · · · · · ·	-154 : 154
Medium coarse graver, browns +) - +0	: GREENFIELD A3.	: Retusat, Deutock at	1)4
GREENFIELD 50.	: Topsoil and gravel fill 0 - 5	: GREENFIELD B49.	
Medium coarse sand and gravel,	: Clay, silty, brown 5 1 - 20		- 3
red-brown	: Clay, gray	, , ,	- 10 - 40
Fine to medium sand, red-brown 56 - 64	: Arkose, red at 65	, , , , , , , , , , , , , , , , , , , ,	- 43
Fine to medium sand, some gravel,	:	: Sand and gravel, trace of	\ -
red-brown	: GREENFIELD Bl. : Sand and gravel, loamy 0 - 3		- 49 .t 49
Time to medical sound, led blownive of	: Sand, hard, some gravel 3 - 6	·	V + )
GREENFIELD 51.	: Clay, sandy, soft, yellow 6 - 16	: GREENFIELD B54.	
Medium coarse gravel, gray 0 - 5 Clay, gray 5 - 93	: Clay, soft, blue 16 - 46 : Sand and gravel 46 - 65		- 1 - 10
Very fine sand, gray 93 -114	: Sand, cemented, red 65 - 67		- 21
Medium coarse gravel, gray 114 -115	: Refusal at 67	: Sand, some gravel, trace of	
GREENFIELD 52.	: NOTE: Bedrock surface rises sharply to west almost at surface at west abutment.	· · · · · · · · · · · · · · · · · · ·	- 24 .t 24
Coarse sand and gravel, brown 0 - 5	:	· NCIUDAL	0 24
Clay, gray 5 - 64	: GREENFIELD B3.	: GREENFIELD B55.	
Fine silt and clay, gray 64 - 82 Hardpan 82 - 83	: (Located near center of river.)		- 1 - 95
Hardpan 82 - 83	: Coarse sand and gravel, loose, : dirty 0 - 5	: Fine sand, trace of gravel 1 · Clay, gray, trace of gravel 9.5 ·	- 9.5 - 13
GREENFIELD 53.	: Fine sand and clay, soft, gray 5 - 20	: Clay, soft, dark gray 13	- 40
Coarse gravel, gray 0 - 7	: Coarse sand and gravel, hard,	, ,	- 43
Clay, gray	: red		- 44 - 52
Medium sand and gravel, gray 48 - 51	:	:	
Medium coarse sand, gray, and	: GREENFIELD B7.	: GREENFIELD B56.	0
gravel	: Fine sand, trace of silt 0 - 13 : Medium to fine sand and gravel. 13 - 17	, , ,	- 8 - 50
	: Clay and silt 17 - 49	: Silt, trace of clay, some fine	1
GREENFIELD 57.	: Medium to fine sand and silt 49 - 50	, , ,	- 75
Coarse gravel	: Refusal, bedrock at 50	: Fine sand, some silt 75 - Sand, some gravel and clay,	- 85
Fine sand and clay 27 - 30	: GREENFIELD B22.		- 90
Clay, blue 30 - 52	: Medium and fine sand, fill 0 - 10	:	
Fine sand and clay 52 -115  Medium gravel	: Fine sand and gravel, trace of : silt	: GREENFIELD B57. : Topsoil 0	- 1.5
Fine sand	: Fine sand and gravel 30 - 31	: Medium to coarse sand, trace	,
Sand and gravel, red 130 -133	:		- 13.0
Refusal at 133	: GREENFIELD B35. : Broken rock and rock dust,	: Medium sand, medium compact, : gray 13.0 -	- 20.5
GREENFIELD 61.	: compact 0 - 4	: Fine sand, compact 20.5 -	
Coarse gravel 0 - 10	: Sand, gravel and clay, compact 4 - 13.5	: Fine to medium sand, compact,	
Fine sand	: Rock obstruction at 13.5	: brown	- 29.0
Clay, blue	: GREENFIELD B42.	: compact 29.0 -	- 80.0
Fine clay, sandy 89 -112	: Coarse to medium sand, trace of	: Silt and fine sand, little clay. 80.0 -	
Fine sand	: gravel and silt 0 - 15 : Clay, gray, trace of silt 15 - 43	: Fine sand, silt and clay, : compact, moist	- 95.0
Refusal at 120	: Coarse sand, brown, some gravel,	: Silt, trace of sand and clay,	)).··
	: trace of silt 43 - 70	: varved 95.0 -	-101.5
OREENFIELD 62.  Medium gravel 0 - 10	: Hardpan 70 73 : Refusal at 73	: GREENFIELD B58.	
Medium sand 10 - 20	:	: Silt and organic matter, loose,	
Sand and clay 20 - 30	: GREENFIELD B43.		- 4
Fine sand and clay	: Topsoil 0 - 1 : Fine sand, trace of silt, brown. 1 - 9		- 55 - 71
Fine sand and clay 58 -112	: Arkose, red at 9	: Silt, gray, some clay and fine	1 -
Sand, red 112 -117	:	: sand 71 -	-102.5
Refusal at 117	: GREENFIELD B44. : Topsoil 0 - 1	: GREENFIELD B60.	
CREENFIELD 65.	: Fine to medium sand, gray-brown. 1 - 24		- 1
Coarse sand and gravel 0 - 15	: Silt, clayey, gray 24 - 78		- 4
Medium sand and clay	: Sandstone, red 78 - 79	: Clay and silt, some fine sand, : varved 4 -	-151.5
Clay, gray 25 - 75	: GREENFIELD B45.		-//
Coarse sand and gravel, some	: Topsoil 0 - 1	: GREENFIELD B62.	
clay	: Fine silt trace of sand and	*	- 1 - 59
Fine and medium gravel 81 - 86 Coarse and medium gravel 86 - 97	: Fine silt, trace of sand and : clay 20 - 24	, , ,	- 59 - 65
Coarse sand and gravel 97 -107	: Clay and silt, gray 24 - 54	: Silt, gray, and clay 65 e -	
Fine sand and clay 107 -110	: Sand and gravel 54 - 55	· CDEPNETEID DI	
Coarse and medium gravel 110 -116 Medium to fine sand and gravel 116 -122	: Refusal at 55 : NOTE: Bedrock drops to 73 ft. deep at north	: GREENFIELD R1. : Fine sand, brown and gray,	
Gravel and medium sand 122 -130	: end of bridge.	trace of silt and clay 0 -	- 3
Medium sand	: CREENETEID BLA	: Fine sand, brown, trace of : silt and clay 3 -	- 5
Refusal, arkose, red at 133	: GREENFIELD B46. : Topsoil 0 - 1	: silt and clay 3 - : Fine sand, gray, some clay	,
GREENFIELD A1.	: Fine sand, brown, some silt l - 7		-183
Topsoil and gravel fill 0 - 7	: Clay and silt, gray 7 - 42 : Sandstone at 42	GREENFIELD R2.	
Silty clay, gray, saturated 7 - 30 Fine sandy silt 30 - 40	. Danus concessions at 42	Topsoil 0 - Coarse to fine sand and little	- 1
Clay 40'2 - 42	: GREENFIELD B47.		- 21.5
Silt and fine sand	: Topsoil 0 - 1 : Fine sand, silty 1 - 3	: GREENFIELD R3.	
Clay, red	: Fine sand, silty l - 3 : Fine to coarse sand, trace of	Topsoil 0 -	2.3
	: medium gravel 3 - 11	Fine sand, trace of silt 2.3 -	- /
GREENFIELD A2.	: Fine sand, silty, trace of clay. 11 - 19 : Clay, silty, gray 19 - 38	: Fine sand, trace of gravel 9 - : Silt, gray, some fine sand 16 -	- 16 - 21.5
Gravel and coarse sand, small in. rounded flat pebbles 0 - 15	: Clay, silty, gray	: Medium silt, gray 21.5 -	- 24.5
Fine to medium sand, gray 15 - 22	: red 38 - 41	: Clay, very stiff, moist 24.5 -	a a l a
Fine clay, sandy, silty 22 - 30	: Refusal at 41	: Clay, hard, gray, moist 55 -	2010)

	Depth	:	Depth	:	Depth
GREENFIELD R4.		: GREENFIELD R18.		: GREENFIELD R28.	
Fine sand, brown	0 - 5	: Organic matter, some fine sand,		: Topsoil	
Sand, brown, some gravel	5 <b>-</b> 10 10 <b>-</b> 136	: gray	0 - 1.5	: Fine to medium sand, brown : Fine sand, trace of silt, gray	
Clay, some silt and fine sand	10 -136 at 136	: Sand, loose, gray	1.) - 0.0	: Clay and silt, gray	
		: gray	6.8 - 13	: Refusal	
GREENFIELD R5.	0 - 2.5	Refusal	at 13	: GREENFIELD R29.	
Topsoil		: GREENFIELD R19.		Topsoil	70 - 1
Fine sand, trace of silt, loose,		: Topsoil	0 - 1	: Fine to medium sand, brown,	
gray	8 - 10	: Fine to medium sand and silt,	3 5 5	trace of silt	1 - 2
Fine to coarse sand, fine gravel, traces of silt	10 - 16.5	: medium compact	1 - 5.5 at 5.5	<ul><li>Medium to coarse sand, gray,</li><li>some fine to medium gravel</li></ul>	2 - 5
Clay, traces of silt, soft, gray.	16.5 -103	1		: Silt and clay, varved	
Refusal	at 103	: GREENFIELD R2O.		: Fine to medium sand, red,	
GREENFIELD R6.		Organic matter, black	0 - 1	: some decomposed rock, trace of silt	6.5 - 7
Topsoil	0 - 3.5	: gray	1 - 4.5	: Refusal	
Medium silt, brown	3.5 - 9	: Fine to medium sand, some	1.5 50	:	
Sand, brown, trace of silt,	9 - 17	: silt, medium compact : Medium to fine sand, medium	4.5 - 7.8	: GREENFIELD R30. : Topsoil	0 - 1.5
Medium sand, brown, fine gravel		: compact	7.8 - 10.2	: Coarse to fine sand, gray,	2.,
Clay, trace of silt, soft, gray,		: Hardpan	10.2 - 11.8	: little fine to coarse gravel	
moist		Refusal, ledge	at 11.8	: Fine sand, little silt, gray : Clay, silty, gray, layers of	6 - 10
Relusar	at 77.5	: GREENFIELD R21.		fine sand	10 - 50.5
GREENFIELD R7.		: Silty sand, gray		: Fine to medium sand, red, some	
Topsoil	05	: Clay, silty and sand, varved		: silt, trace of fine to	EO E 57
Sandstone, weathered	•5 - 5 at 5	: Medium to coarse sand, red : Refusal	45 - 47.5 at 47.5	: coarse gravel	
		:			,
GREENFIELD R8.	0	: CREENFIELD R22.	0 0 0	: GREENFIELD R31.	0
Topsoil	0 - 1	Fine to coarse sand, red	0 - 3.5 3.5 - 4.5	: Topsoil, peat	0 - 1.5
brown	1 - 6	: Sandstone, decomposed, red	4.5 - 5.5	: brown	1.5 - 4.5
Fine to coarse sand, some silt	6 - 11	: Refusal	at 5.5	: Silt, some fine sand, stiff,	1
Clay, traces of silt, soft, gray. Till, compact, red	11 - 31.8 31.8- 98	: GREENFIELD R23.		: gray, moist	4.5 - 11.5
Sandstone, red	98 - 99	: Coarse to medium sand and		: gray	11.5 - 18
·		gravel, red	0 - 2	: Clay, soft, gray, moist	18 - 25
GREENFIELD R9. Fine sand	0 - 4	: Silt and clay, layer of medium	2 - 7	: Clay, very stiff, gray, moist	
Sand, some gravel	4 - 10	to fine sand	2 <b>-</b> 1	: Refusal	a.c +7
Clay, some silt	10 - 24	: gravel		: GREENFIELD R32.	
Sand, some gravel and clay	24 - 27	: Silt, clay and sand, varved	8.5 - 25	: Topsoil, peat	
Refusal	at 27	Sand, silty	25 - 38 38 - 44.5	: Fine sand, compact, gray, moist. : Fine gravel, compact, brown,	.5 - 3.5
GREENFIELD R10.		Fine to coarse sand, red, and	30 4,.,	: some sand	3.5 - 5.5
Sand, silty	0 - 3.5	: gravel	44.5 - 48	: Fine sand, some silt, compact,	
Refusal	at 3.5	: Sandstone, decomposed, red	at 48	: brown	5.5 - 49.5 49.5 - 57.5
CREENFIELD R11.		: GREENFIELD R24.		: Refusal	at 57.5
Fine sand and silt, brown		: Fine to coarse gravel and	- 0	•	
Coarse to fine sand, trace of gravel, brown	5 - 10.5	: sand: : Fine sand, trace of silt	0 <b>-</b> 8 8 <b>-</b> 20	: GREENFIELD R33. : Topsoil	05
Fine sand and silt, gray-brown		: Fine sand and silt, very	,	: Fine gravel, some fine sand,	.,
Medium to fine sand		: compact	20 - 28	: brown	
Silt, trace of fine sand, gray  Medium fine sand, gray		: Silt, very compact, dry, red-brown	28 - 40	: Fine sand, compact, gray	
Clay, some silt, gray		: Silt, compact, brown	The second secon	: Fine sand, very compact, gray,	11.7 - 17.7
		Refusal	at 50	trace of silt	15.5 - 23
GREENFIELD R12.		. Openmetern por		: Fine sand and silt, very : compact, gray	22 - 17 5
Fine and medium sand, some gravel, silt, and clay		: GREENFIELD R25. : Fine to coarse gravel, some		: Refusal	
Sandstone, decomposed		: sand, compact	, 0 - 12	:	
CRRENETELD P12		: Fine sand, trace of silt,		: GREENFIELD R34. : Topsoil and peat	0 - 4.5
GREENFIELD R13. Topsoil	0 - 1	: compact: : Fine to coarse sand, some fine	12 4 - 20	: Topsoil and peat	- 4.9
Fine sand, some silt, loose,		gravel, trace of silt	28 - 32	: compact, brown	4.5 - 6.5
brown		: Fine to medium gravel,		: Fine sand and silt, compact,	6 5 30
Silt, stiff, brown	3.7 - 10	: some coarse sand and : silt, very compact	32 - 39	: gray	6.5 - 12
gray	10 - 40	: Sandstone, red		: gray	12 - 13.5
and the same of th		Refusal	at 40	: Clay, some silt, hard, gray	
GREENFIELD R14. Silt and sand, loose	0 - 1.5	: : GREENFIELD R26.		: Refusal	at 36.5
Sandstone, weathered	1.5 - 9.5	: Sand, gray, some silt	0 - 2	: GREENFIELD R35.	
,		: Sand, gray, silt, trace of clay.	2 - 13	: Topsoil and peat	0 - 5
GREENFIELD R15.		: Clay, gray, trace of silt	13 - 25	: Coarse gravel, some coarse sand,	5 - 8.5
Medium gravel, some coarse sand, trace of silt, compact, brown	0 - 3.8	: Fine sand, brown, silt, trace : of clay	25 - 27	: compact, brown	8.5 - 33.5
		: Fine sand, brown, trace of silt.	27 - 32.5	: Refusal	at 33.5
Silt, some clay, trace of sand,	3.8 - 6	: Fine sand, brown, silt: : Coarse sand, trace of gravel	32.5 - 36.5	: CDEENETEID D26	
hard, brown	6 - 10			: GREENFIELD R36.	0 - 1.5
	6 - 40		36.5 - 41	: Topsoil and beat	
hard, brown	6 - 40	and silt		: Topsoil and peat : Coarse gravel, compact, brown	
Clay, very stiff		and silt		<ul><li>Coarse gravel, compact, brown</li><li>Clay, trace of silt, hard</li></ul>	1.5 - 2.5
hard, brown Clay, very stiff  GREENFIELD R16. Sand and clay, trace of gravel, brown	0 ~ 3	and silt	41 - 50	<ul><li>Coarse gravel, compact, brown</li><li>Clay, trace of silt, hard</li><li>Fine sand, trace of silt,</li></ul>	1.5 - 2.5 2.5 - 7.5
Clay, very stiff	0 ~ 3	and silt Sandstone, red Refusal  GREENFIELD R27 Topsoil.	41 - 50	<ul><li>Coarse gravel, compact, brown</li><li>Clay, trace of silt, hard</li></ul>	1.5 - 2.5 2.5 - 7.5 7.5 - 11.5
hard, brown Clay, very stiff  GREENFIELD R16.  Sand and clay, trace of gravel, brown Clay, brown and gray, trace of sand Clay, soft, gray	0 - 3 3 - 5 5 - 25	and silt  Sandstone, red  Refusal  GREENFIELD R27.  Topsoil  Fine sand, brown, little	41 - 50 at 50	Clay, trace of silt, hard Fine sand, trace of silt, compact, gray Clay, gray, hard Fine sand, trace of silt,	1.5 - 2.5 2.5 - 7.5 7.5 - 11.5 11.5 - 13
hard, brown.  Clay, very stiff.  GREENFIELD R16.  Sand and clay, trace of gravel, brown.  Clay, brown and gray, trace of sand  Clay, soft, gray.  Sand, some silt, trace of clay	0 - 3 3 - 5 5 - 25 25 - 35	and silt Sandstone, red Refusal  GREENFIELD R27. Topsoil. Fine sand, brown, little silt	41 - 50 at 50 05	Coarse gravel, compact, brown Clay, trace of silt, hard Fine sand, trace of silt, compact, gray Clay, gray, hard Fine sand, trace of silt, compact, gray	1.5 - 2.5 2.5 - 7.5 7.5 - 11.5 11.5 - 13
hard, brown Clay, very stiff  GREENFIELD R16.  Sand and clay, trace of gravel, brown Clay, brown and gray, trace of sand Clay, soft, gray	0 - 3 3 - 5 5 - 25	and silt  Sandstone, red  Refusal  GREENFIELD R27.  Topsoil  Fine sand, brown, little	41 - 50 at 50 05 -5 - 5 5 - 19.5	Coarse gravel, compact, brown Clay, trace of silt, hard Fine sand, trace of silt, compact, gray Clay, gray, hard Fine sand, trace of silt, compact, gray	1.5 - 2.5 2.5 - 7.5 7.5 - 11.5 11.5 - 13 13 - 20 20 - 40

Table 12.--Water levels in observation wells

(Water levels in feet below land-surface datum. For description of wells, see table 10.)

Date	Water level	Date	Water level	Date	Water level	Date	Water level	Date	Water level	Date	Water level
		ASHFIELI	D 33					COLRAIN 1	Continued		
10(0		1069		1060				ater levels	from rec		1.)
1968 May 1	7.92	1968 Nov. 8	8.09	1969 June 4	8.06	1968 Nov 1		1968 Dec. 20	6.60	Feb. 6	7.49
13	7.99	Dec. 12	7.88	18	8.02	2		21	6.52	7	7.50
28	8.04	1969	0 -	July 1	8.09	3	7.90	1969		8	7.5
une 20	7.67	Jan. 6	8.02	14	8.17 7.88	14	1.7-	Jan. 7	7.27	9	7.5
uly 10 24	8.03 8.12	29 Mar. 7	7.88 8.14	Aug. 1 13	8.02	6		8 9	7.30 7.33	10	7.5
ug. 5	8.18	24	7.30	Sept. 12	8.01	7	7.95	10	7.36	12	7.5 7.5
20	8.40	Apr. 11	6.49	26	8.18	Ė	7.68	11	7.39	13	7.5
ept. 5	8.74	25	6.51	Oct. 10	8.22	9		12	7.41	14	7.5
23 ct. 8	8.37 8.27	May 9 22	7.97 8.01	24 Nov. 7	8.21. 7.58	10		13	7.43	15	7.6
10	8.29	44	0.01	1104.	1.00	12		14 15	7.47	16 17	7.5 7.5
						13		16	7.51	18	7.6
		ASHFIELI	D 34			14 15	7.41	17 18	7.54 7.55	19 20	7.6
1968		1968		1969		16	7.36	19	7.54	21	7.6
ay l	0.35	Nov. 8	3.62	June 18	0.65	17		20	7.40	22	7.6
13 28	•53 •60	Dec. 12 1969	.17	July 1 14	.70 .86	18		21	7.52	23	7.6
ine 20	.10	Jan. 6	•59	Aug. 1	.62	19 20		22 23	7.55 7.57	24 25	7.6 7.6
ly 10	.49	29	.62	13	.51	21	6.87	27	7.23	26	7.6
24	.74	Mar. 7	•74	Sept. 11	.65	22		28	7.35	27	7.6
g• 5 20	1.32 2.69	Apr. 11	.66 +.74	25 Oct. 10	.86 1.16	23 24		29 30	7.40	28 Mar. 1	7.7
pt. 5	3.55	25	+.62	24	1.50	Dec. 14		31	7.39	Mar. 1	7.7 7.7
23	3.89	May 9	•33	Nov. 7	.42	15	7.00	Feb. 1	7.38	3	7.7
et. 8	4.37	22	.54	1970		16		2	7.07	4	7.7
21	4.32	June 4	.68	Apr. 28	+.30	17 18		3	7.40 7.43	5	7.7
		ASHFIEI	ம 36			19		5	7.47		7.7
1968		1968		1969				COLRAII	8 1/8		
ay 1	2.22	Oct. 21	2.75	June 4	1.99						
13 28	2.32	Nov. 8 Dec. 12	2.69 2.14	18 July 1	1.99	1964		1967	00 00	1969	17.0
ne 20	1.43	1969	C • 14	July 1 14	2.15	Dec. 4	23.02	Sept. 29 Oct. 27	20.82	Mar. 28 Apr. 10	17.9 16.2
ly 10	1.70	Jan. 29	2.05	Aug. 1	2.36	Feb. 3	23.48	Nov. 28	21.67	24	14.6
24	2.03	Mar. 7	2.48	13	2.32	24	23.40	Dec. 6	21.06	28	15.8
g. 5	2.23	24	1.89	Sept. 12	2.40	Mar. 23	, ,	1968	00.00	May 8	16.5
20 pt. 5	2.55	Apr. 11 25	.83 .60	26 Oct. 10	2.61 2.64	Apr. 29 May 24		Jan. 26 Feb. 21	20.36	22 27	17.2 17.6
23	2.62	May 9	1.50	24	2.73	June 21		Mar. 27	18:82	June 3	18.0
t. 8	2.64	22	1.67	Nov. 7	2.39	July 29		Apr. 25	17.46	17	18.1
		COTDATA				Aug. 28		May 2	18.23	26	18.5
		COLRAII	NI			Sept. 29 Oct. 27		14 24	18.40 18.52	July 1	18.8
1968		1968		1969		Nov. 23		29	18.76	30	18.9
y 2	6.73	Oct. 8	8.63	June 3	7.40	Dec. 22	23.14	June 5	18.30	31	19.1
14	7.01	22	7.98	, 17	6.59	1966		20	16.94	Aug. 11	19.6
29 ne 5	7.30 6.70	Nov. 7 Dec. 13	8.02	July 1	7.36	Jan. 25		26	16.83	27 Comb 11	20.3
ne 5 20	5.85	1969	6.59	31	7.59 6.48	Feb. 23 Mar. 23		July 10 26	18.07 18.12	Sept. 11 23	20.3
ly 10	7.14	Jan. 7	7.27	Aug. 11	7.04	Apr. 26		Aug. 5	18.69	Oct. 17	21.2
25	7.83	28	7.39	Sept. 11	7.63	May 25	18.77	21	19.48	23	21.2
g. 5	8.05	Mar. 24	7.05	25	8.12	June 23		27	19.79	29	21.4
21 pt. 5	8.78 9.38	Apr. 10 24	4.93 4.59	Oct. 8 23	8.06 7.91	July 26 Aug. 24		Sept. 5 24	20.25	Nov. 6	20.8
26	8.73	May 8	6.82	Nov. 6	6.84	Sept. 23		26	21.00	26	19.7
t3_	8.60	22_	6.95			Oct. 26	22.36	Oct. 8	20.86	Dec. 4	19.2
(Ded	lv mean w	ater levels	from rec	order graph.	)	Nov. 26		22	21.37	1970	-0
- <del>1</del> 968		1968		1968	<u>-</u>	Dec. 26		Nov 7	21.50	Mar. 10	18.1
t. 8	7.86	Oct. 16	8.16	Oct. 24	8.07	Jan. 27		Nov. 7 26	21.79	Apr. 9	17.7
9	7.88	17	8.16	25	8.00	Feb. 27		Dec. 12	20.47	27	16.0
10	7.95	18	8.18	26	7.85	Mar. 28	21.07	24	19.44	28	16.1
11	8.03	19	8.16	27	7.87	Apr. 27		1969	10.75	May 27	17.3
12	8.08 8.11	20 21	7.95 7.93	28 29	7.91 7.95	May 25		Jan. 8	19.17	June 26	18.8
10		( )	1093	29	1.7)	June 27	17.52	Feb. 25	19.50	July 29	20.2
13 14	8.14	22	8.00	30	7.98	July 28		Mar. 6	19.77	Aug. 27	21.1

Table 12.--Water levels in observation wells (Continued)

Date	Wat lev		e	Water level	Date	Water	Date		Water level	Date		Water level	Date		Water
							***************************************				22 (				
	(Daily me			Continued from rec	order graph	.)		(Dai)				Continued from rec		raph	.)
1	.969		1969		1969		1	970			970			970	
Apr. June	29 9. 3 16. 4 16. 5 16. 6 16.	01 08 18 17	14 15 16 17	13.60 13.69 13.99 14.16 14.32	Nov. 6 7 8 9	17.44 17.10 15.66 14.88 14.32	Apr.	13 14 15 16 17	8.60 8.88 9.11 9.37 9.65	Apr. May	30 1 2 3 4	11.67 12.05 12.41 12.69 12.83	May	17 18 19 20 21	15.16 14.79 13.73 13.34 13.19
	7 15. 8 14. 9 14. 10 14. 11 14. 12 14. 13 14. 14 14.	66 36 22 20 26 35	18 19 20 21 22 23 24 25	14.49 14.66 14.86 15.04 15.28 15.51 15.75 15.96	11 12 13 14 15 16 17 18	13.78 13.42 13.25 13.02 12.69 12.60 12.58 12.62		18 19 20 21 22 23 24 25	9.98 10.38 10.74 11.00 11.29 11.58 11.66 11.05		5 6 7 8 9 10 11 12	13.03 13.28 13.50 13.68 13.86 14.04 14.19 14.38		22 23 24 25 26 27 28 29	13.13 13.16 13.24 13.34 13.37 13.52 13.70
	15 14. 16 13. 17 13. 18 13. 19 13.	79 70 70	26 27 28 29 30	16.19 16.43 16.62 16.78 16.95	19 20 21 22 1970	12.74 11.98 11.48 11.23		26 27 28 29	10.86 10.80 10.93 11.27		13 14 15 16	14.53 14.70 14.89 15.05	June	30 31 1 2	14.01 14.14 14.31 14.43
	20 13. 21 13.	92	31	17.10	Jan. 20 Feb. 19	17.50 13.04				COL	RAIN	34			
	22 13. 23 13.	92	2	17.39	20	13.30	May	.968	16.08	Jan.	969 29	22.43	Oct.	.969 24	27.66
	24 13. 25 13. 26 13. 27 13.	74 53 57	5 5 6 7	17.51 17.63 17.73 17.83 17.91	21 22 23 24 25	13.51 13.67 13.88 14.06 14.20	June July	14 28 20 10	17.32 18.55 13.81 12.70	Mar.	6 27 10 24	25.21 26.78 22.43 4.13	Nov.	6 20 4 -970	28.60 20.95 15.76
July	28 _ 13. 29 13. 30 13. 1 14. 2 14.	77 37 00	8 9 10 11 25	17.90 17.39 17.28 17.36 18.55	26 27 28 Mar. 1	14.41 14.58 14.76 14.92	Aug. Sept.	25 5 20 5 26	17.52 20.59 23.86 26.36 28.59	May June July	8 22 3 17 1	9.53 11.14 13.76 15.56 15.53	Jan. Feb. Mar. Apr.	20 18 10 9 27	20.41 17.92 19.55 20.33 6.48
	3 14. 4 14. 5 14. 6 14. 7 15. 8 15.	31 47 62 31 00 25 Oct	26 27 28 29 30	18.59 18.64 18.68 18.74 18.78 18.83	2 3 4 5 6 7 8	15.14 15.35 15.52 15.68 15.84 15.98 16.10	Nov. Dec. Jan.	8 22 7 13 969	29.55 30.29 30.91 21.35	Aug. Sept.	14 31 11	18.63 21.84 18.60 22.99 24.73 26.23	May June July	12 2 17 2 15 29	10.80 13.38 17.24 20.89 23.24 25.42
	9 15. 10 15. 11 15.	73	3	18.87 18.87	9	16.24 16.38				COL	RAIN	35			
	11 15. 12 16. 13 16. 14 16. 15 16. 16 16. 17 16. 18 17. 19 17. 20 17. 21 17. 22 17. 23 17.	20 +1 56 59 32 95 08 21 33 +4	4 56 7 8 9 10 11 12 13 14 15 16	18.77 18.75 18.75 18.75 18.80 18.81 18.85 18.90 18.93 18.97 19.00	11 12 13 14 15 16 17 18 19 20 21 22 23	16.49 16.62 16.72 16.83 16.92 17.00 17.08 17.13 17.18 17.23 17.23 17.11 16.88	June July Aug. Sept.	2968 214 29 20 10 25 5 20 5 26 8	5.45 5.44 5.22 5.30 5.39 5.43 5.53 5.42 5.45 5.37 5.40	Oct. Nov. Dec.	7	5.42 5.39 5.44 5.47 5.47 5.50 5.38 5.26 5.35 5.47	May June July Aug. Sept.	22 3 17 1 14 31 11 11 25 8	5.34 5.33 5.41 5.43 5.40 5.40 5.40 5.40
	24 17. 25 17. 26 17.	70 77	17 18 19	19.09 19.13 19.15	24 25 26	16.55 16.34					WAY .				
	27 17.	91	20	19.18	27	15.75 14.67		-60			- 60				
Aug.	28 17. 29 15. 30 14. 31 14. 1 13. 2 13. 3 13. 4 13. 5 12. 6 12. 7 12. 8 12. 9 12.	76 50 32 39 52 56 60 92 70 78 84 <b>N</b> ov	2	19.22 19.24 19.25 19.25 19.25 19.24 19.24 19.27 19.28 19.30 19.32	28 29 30 31 Apr. 1 2 3 4 5 6 7 8	13.46 12.29 11.24 10.67 10.75 10.23 8.31 8.06 8.30 8.53 8.66 8.55 8.06	May June	968 1 13 28 20 10 24 5 20 5 20	12.31 12.30 12.38 12.26 12.30 12.35 12.40 12.55 12.60 12.59	Nov.	968 8 21 8 12 969 6 29 7 24 11	12.59 12.59 12.57 12.29 12.34 12.37 12.26 12.30	Apr. May June July Aug.	25 9 23 4 18 1 14 13	12.19 12.31 12.32 12.38 12.39 12.45 12.54 12.40
	10 13. 11 13. 12 13.	16	3 4 5	18.93 18.52 18.26	10 11 12	7.75 7.95 8.29									

Table 12.--Water levels in observation wells (Continued)

Date	Water level	Date	Water level	Date	Water level	Date	Water level	Date	Water level	Date	Water level
		COLRAIN	29				(	COLRAIN 33	Continued		
1968 May 2 14 29 June 20 July 10 25 Aug. 5 20	7.57 7.28 7.56 6.67 7.55 7.78 7.87 7.95	1968 Oct. 8 22 Nov. 7 Dec. 13 1969 Apr. 10 24 May 8	7.35 8.09 7.97 7.07 7.23 5.31 7.13	1969 June 17 July 1 14 31 Aug. 11 Sept. 25 Oct. 17 23	6.42 7.36 7.66 6.22 6.88 7.73 7.53 7.37	1969 Apr. 10 24 May 8 22 June 3 17 July 1 14	7.75 7.31 13.51 14.66 16.03 13.68 14.03 16.58	1969 July 31 Aug. 11 Sept. 11 25 Oct. 8 24 Nov. 6 Dec. 4	14.24 13.17 17.37 18.56 18.80 19.25 17.35 14.18	1970 Jan. 20 Feb. 18 Mar. 10 Apr. 9 27 June 2	17.50 12.86 16.39 8.06 10.80 14.49
Sept. 5 26	7.88 7.83	June 3	6.99 7.29	Nov. 6	7.25		ly mean	water levels	from rec		1.)
		COLRAIN	30			1968 Oct. 29 30	19.12 19.12	1968 Dec 29	15.03 15.21	1969 Feb. 27 28	17.97
1968 May 2 14 29 June 20 July 10 25 Aug. 5 20 Sept. 5 26 Oct. 8 22	2.94 3.07 3.83 2.58 4.01 5.67 7.11 8.54 9.93 9.17 9.78 8.46	1968 Nov. 7 Dec. 12 1969 Jan. 7 29 Mar. 6 24 Apr. 10 24 May 8 22 June 3	7.62 2.78 3.64 3.77 5.66 2.67 2.31 2.55 2.89 3.38 4.33	June 17 July 1 14 31 Aug. 11 Sept. 11 25 Oct. 8 23 Nov. 6 20 Dec. 4	3.41 4.52 5.77 4.17 3.88 5.60 6.86 7.28 7.85 6.84 2.40 2.89	31 Nov. 1 2 3 4 5 6 7 8 9 10 11	19.14 19.17 19.20 19.23 19.23 19.24 19.25 19.00 18.54 18.41 18.20 17.87	31 1969 Jan. 1 2 3 4 5 6 7 8 9 10 11	15.38 15.50 15.67 15.84 16.01 16.18 16.33 16.44 16.55 16.76 16.86	Mar. 1 2 3 4 5 6 7 8 9 10 11 12	18.01 18.02 18.03 18.05 18.07 18.08 18.08 18.99 18.11 18.14 18.17 18.21
		COLRAIN	31			13 14 15	17.73 17.70 17.65	12 13 14	16.96 17.04 17.13	14 15 16	18.25 18.28 18.32
1968 Dec. 12 1969 Jan. 7 28 Mar. 24 Apr. 10 24 May 8 22 June 3 July 1 14	2.21 2.15 2.03 1.75 1.62 1.57 2.27 2.14 2.41 2.58 2.89	1969 July 31 Aug. 11 Sept. 11 25 Oct. 8 23 Nov. 6 20 Dec. 4 1970 Jan. 20	2.03 2.25 2.35 3.12 2.71 2.71 1.87 1.77 2.31	1970 Feb. 18 Mar. 10 Apr. 8 27 May 12 June 2 16 July 2	2.08 2.22 1.76 1.91 2.40 2.57 3.05 3.04 3.39 4.30	16 17 18 19 20 21 22 23 24 25 26 27	17.57 17.42 17.15 16.17 15.40 14.90 14.64 14.54 14.44 14.46 14.51 14.53	15 16 17 18 19 20 21 22 23 24 25 26	17.22 17.31 17.38 17.44 17.49 17.65 17.60 17.65 17.69 17.57 17.34 17.27	17 18 19 20 21 22 23 24 25 26 27 28	18.34 18.35 18.35 18.29 18.16 17.86 17.57 17.29 16.35 13.58 10.33 9.03 8.91
		COLRAIN	32			29 30	13.49	28 29	17.17	30 31	8.88
1968 May 2 14 29 June 20 July 10 25 Aug. 5 20 Sept. 5 26 Oct. 8 22 Nov. 7 Dec. 12 1969 Jan. 7	3.93 4.69 6.42 2.40 4.20 5.79 6.75 7.60 8.18 7.92 8.20 8.04 8.14 3.58 4.93	Jan. 29 Mar. 6 24 Apr. 10 24 May 8 22 June 3 17 July 1 14 31 Aug. 11 Sept. 11 Sept. 11 25 Oct. 8  COLRAIN	17.85 18.79	1969 Oct. 23 Nov. 6 20 Dec. 4 1970 Jan. 20 Feb. 18 Mar. 10 Apr. 9 27 May 12 June 2 16 July 2 15 29	7.99 7.27 2.73 3.74 5.79 3.73 4.75 2.03 2.44 4.28 4.58 5.74 6.68 7.26 7.76	Dec. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	13.17 12.95 12.87 12.45 10.12 9.19 9.16 9.44 9.93 10.51 11.05 12.05 12.36 (12.40 12.72 13.05 13.32 13.52 13.69 13.91 14.08 14.17 14.29	30 31 Feb. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	17.11 17.07 17.00 16.98 16.98 17.00 17.05 17.11 17.18 17.27 17.34 17.39 17.44 17.51 17.63 17.67 17.72 17.76 17.78	Apr. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	9.12 9.29 9.51 9.35 8.44 7.78 7.57 7.71 7.78 8.10 8.46 8.71 9.51 9.85 10.23 10.06 10.07 9.83 7.58 7.28
29 June 20 July 10 25	16.72 12.28 13.64 16.16	Sept. 5 26 Oct. 22 29	19.34 18.97 19.27 19.12	Jan. 7 29 Mar. 6 27	16.46 17.13 18.08 9.60	25 26 27 28	14.48 14.65 14.79 14.91	23 24 25 26	17.91 17.92 17.92 17.94	25 26 27 28	7.64 8.16 8.65 9.08

Table 12.--Water levels in observation wells (Continued)

Date	Water level		Water level	Date	Water level	Date		Water level	Date	Water level	Date		ter vel
		CONWAY	185						HEAT	H 11			
10	968	1968		1969		10	968		196	8	1	.969	
May	1 0.69		0.91	June 4	2.01	May	2	5.15	Dec 1	mer .	July		. 54
	13 .42		1.89	18	1.18		14	5.67	196				.25
June	28 1.28		.85	July 1	2.03	June	29	5.67 3.99		8 5.97 6 7.63	Aug.		.48
July	10 1.87		.90	Aug. 1	1.22		10	6.03		3 7.87	Sept.		.29
	24 2.35	Mar. 7	.86	13	1.43		25	7.74		6.08	-	25 8	.63
Aug.	5 2.31		.60	Sept. 12	.64	Aug.	5	8.75		0 3.00	Oct.		.35
Sept.	5 4.76	-	.69 .72	26 Oct. 10	1.23	Sept.	20	9.86		8 5.80			.03
Dopus	23 3.53		.56	24	1.56	БСРО	17	11.13		2 5.21	Nov.		.87
Oct.	8 2.78	3 22	1.19	Nov. 7	.65			11.10		3 6.09		_	.11
	21 2.32	2				Oct.		11.45		7 5.75 6 4.72	Dec.		.50
		CONWAY	186					11.41					• )1
and the same of th	968	1968		1969	( 55			Ly mean w		ls from re			_
May	1 5.06 28 5.83		5.57 5.15	June 4	6.20 5.94	Sept.	17	11.12	196 Nov. 1	8 11.41	Mar.	<u>.969</u> 17 8	.06
June	13 5.65		7.17	July 1	6.10			11.11		2 11.40	Mar.		.08
	20 4.85	Jan. 6	5.70	14	6.52		19	11.10	1	.3 11.37		19 8	.07
July	10 5.81 24 6.40		5.37	Aug. 1	4.91			11.08		4 11.35			.04
Aug.	5 6.71		5.76 4.38	Sept. 12	5.30 4.95			11.07		.5 11.33 .6 11.27			.05
	20 6.99	Apr. 11	4.47	26	6.12		23	11.06	1	7 11.21	Apr.	11 3	.35
Sept.	5 7.14		3.86	Oct. 10	6.24			11.07		8 11.12		12 3	.69
Oct.	23 6.18 8 6.24		5.62 5.79	Nov. 7	6.37 4.22			11.09		9 10.89			.85
000.	21 5.95	_	7.17	1004.	4.66			11.12		1 9.75			.99
							28	11.15		2 8.98		16 4	.15
		CONWAY	188					11.19		8.32 4 7.72			.88
-	968	1968	0	1969	- 06	Oct.		11.24		5 7.17		19 3	.38
May	1 4.19		8.32 8.49	June 4	5.86 6.19			11.29		6.61		20 3	.55
	28 5.19		5.07	July 1	6.66			11.33		8 5.84			.57
June	20 3.63			14	6.98		5	11.36	2	9 3.73		23 3	.04
July	10 4.19		5.32 3.68	Aug. 1	6.79			11.40	_	0 3.70			.41
Aug.	5 6.41		2.79	13 Sept. 25	6.19 6.51			11.43		1 4.07 2 4.23			.76
	20 7.07	_	2.72	Oct. 10	6.90			11.49		3 4.19			.45
Sept.	5 7.60		2.68	24	7.25			11.51		4 3.73			.64
Oct.	23 7.74 8 8.27		4.88	Nov. 7	6.60		11	11.52		5 3.22 6 3.68			.81
000.	0 0.2		· n ).).				13	11.50		7 4.02	May	1 5	.08
		DEERFIEI	<del></del>	- 76			15	11.50		8 4.28 9 4.57		3 5	.20
Dec.	9 <u>64</u> 4 4.60	1966 Nov. 26	2.99	1968 Nov. 26	2.81			11.47		0 4.89		4 5	.36
	965	Dec. 28	3.23	Dec. 24	2.78			11.45		2 5.29			.58
Feb.	3 4.76	1967		1969			19	11.43	i	3 5.42		7 5	.73
Mow	24 3.69		2.56	Jan. 28	2.82			11.41		4 5.47			•79
Mar. Apr.	23 2.93 23 2.88	Feb. 27 Mar. 28	3.23 2.08	Feb. 25 Mar. 28	2.45			11.41		5 5.03 6 4.73		9 5	.62
May	24 6.99		2.57	Apr. 28	2.69			11.42		7 4.79			.36
June	23 4.72		2.41	May 27	2.83			11.42		8 4.90			.46
July Aug.	29 5.46		2.49 3.28	June 26 July 30	2.78 2.08			11.42		9 4.97 5.00			.68
	29 3.68		3.98	Aug. 27	3.69			11.40		1 5.14			.97
Oct.	27 3.64	Oct. 27	2.73	Sept. 23	3.45		28	11.41	2	2 5.25			.11
Nov.	29 2.82		2.72	Oct. 29	3.62			11.39	2				.23
	22 3.40 966	Dec. 26 1968	2.88	Nov. 26 Dec. 30	2.70		30 31	11.40	2 196				.38
			3.02	1970		Nov.		11.40		7 7.60			.58
Feb.	24 3.15	Feb. 21	3.35	Jan. 27	3.05		2	11.40		8 7.63		21 5	.41
Mar.	23 2.72		2.47	Feb. 25	2.59			11.40		9 7.67			.24
Apr. May	26 2.94 25 3.10		1.97 2.70	Mar. 27 Apr. 28	1.95 2.64			11.41	1	0 7.68			.21
June	23 4.28		1.73	May 27	2.23			11.41	1				.36
July	26 4.76	July 26	3.55	June 26	3.08		7	11.42	1	3 7.85		26 5	.49
Aug.	24 4.95		5.18	July 29	3.32			11.42	1				.65
Sept.	23 2.74 26 3.02		4.49 3.20	Aug. 27	2.23			11.41	1	5 7.96 6 8.02			.73
	3,00												- 55

Table 12.--Water levels in observation wells (Continued)

		Water			Water			Water			Water		Water			Water
Date		level	Date		level	Date		level	Date		level	. Date	level	Date		level
			HEATH 11	LC	ontinued							HEATH 11C	ontinued			
	(Dail	v mean			from rec	order e	raph.	)		(Da.11	v mean	water levels		order s	rranh	.)
	1969	J 10011		969			969		1	.969	J	1969			1969	
May	30	5.88	June	20	5.50	July	29	7.88	Aug.	31	7.52	Oct. 4	9.24	Oct.	25	10.05
	31	5.91		21	5.60	-	30	5.72	Sept.		7.64	5	9.30		26	10.07
June	1	5.97		22	5.58	Aug.	12	4.77		2	7.77	6	9.32		27	10.09
	2	6.02		23	5.56		13	5.01		3	7.91	7	9.33		28	10.14
	3	6.07		24	5.30		14	5.21		4	8.00	8	9.33		29	10.18
	4	6.19		25	4.82		15	5.40		5	8.16	9	9.35		30	10.21
	5	6.30		26	4.73		16	5.54		6	8.24	10	9.37		31	10.24
	6	6.36	July	15	7.34		17	5.66		7	8.33	11	9.41	Nov.	1	10.26
	7	6.38		16	7.40		18	5.79		8	8.39	12	9.45		2	10.28
	8	6.30		17	7.44		19	5.87		9	8.39	13	9.48		3	10.27
	9	6.25		18	7.50		20	5.99		10	8.40	14	9.49		4	10.27
	10	6.23		19	7.61		21	6.11		11	8.32	15	9.56		5	10.20
	11	6.28		20	7.70		22	6.26		25	8.63	16	9.61		6	9.88
	12	6.38		21	7.78		23	6.40		26	8.69	17	9.64		7	8.52
	13	6.48		22	7.86		24	6.52		27	8.77	18	9.70		8	4.00
	14	6.57		23	7.93		25	6.62		28	8.84	19	9.77		9	3.85
	15	6.62		24	7.98		26	6.77		29	8.93	20	9.81		10	3.96
	16	6.35		25	8.04		27	6.96		30	9.00	21	9.83		11	4.04
	17	5.85		26	8.10		28	7.11	Oct.	1	9.07	22	9.88		12	4.00
	18	5.55		27	8.18		29	7.24		2	9.15	23	9.96		13	4.09
	19	5.45		28	8.24		30	7.39		3	9.18	24	10.01			

### Table 13.--List of basic-data reports for Massachusetts and New Hampshire 1

#### MASSACHUSETTS

- \*1 Wilmington-Reading Area, by John A. Baker and Edward A. Sammel, 1961, 50 p., 2 figs. Covers an area of about 43 square miles in the upper part of the Ipswich River basin in northeastern Massachusetts.
- \*2 Lower Ipswich River basin, by Edward A. Sammel and John A. Baker, 1962, 47 p., 2 figs. Covers an area of about 110 square miles in northeastern Massachusetts.
  - 3 Lowell Area, by John A. Baker and Richard G. Petersen, 1962, 28 p., 2 figs. Covers an area of about 115 square miles and includes most of the metropolitan area of the city of Lowell.
- \*4 Parker and Rowley River basins, by Edward A. Sammel, 1962, 33 p., 2 figs. The rivers drain an area of about 77 square miles in northeastern Massachusetts.
- \*5 Brockton-Pembroke Area, by Richard G. Petersen, 1962, 46 p., 2 figs. Covers an area of about 112 square miles in the northern part of Plymouth County.
- \*6 Western Massachusetts, by Richard G. Petersen and Anthony Maevsky, 1962, 31 p., 1 fig. Covers an area of about 2,865 square miles and includes all of Berkshire, Franklin, Hampshire, and Hampden Counties.
- \*7 Southeastern Massachusetts, by Anthony Maevsky and Janet A. Drake, 1963, 55 p., 2 figs. Covers an area of about 1,930 square miles and includes all of Barnstable, Bristol, Dukes, Nantucket, and Plymouth Counties (exclusive of the Brockton-Pembroke Area).
  - 8 Assabet River basin, by Samuel J. Pollock and William B. Fleck, 1964, 45 p., l pl. Covers an area of approximately 177 square miles and includes parts of Middlesex and Worcester Counties.
- \*9 Housatonic River basin, by Ralph F. Norvite' and Mary E.S. Lamb, 1966, 50 p., 1 pl. Covers an area of about 530 square miles in the upper part of the basin, which is north of the Connecticut-Massachusetts State line.
- Northern part, Ten Mile and Taunton River basins, by John R. Williams and Richard E. Willey, 1967, 56 p., 1 pl., 1 fig. Covers an area of about 195 square miles within Bristol, Norfolk, and Plymouth Counties.
- Il Millers River basin, by Donald R. Wiesnet and William B. Fleck, 1967, 29 p., 1 pl., 1 fig. Covers an area of about 392 square miles within Franklin and Worcester Counties, Massachusetts, and Hillsborough and Cheshire Counties, New Hampshire.
- 12 Taunton River basin, by John R. Williams and Richard E. Willey, 1970, 102 p., 1 pl., 1 fig. Covers an area of about 528 square miles in Bristol, Norfolk, and Plymouth Counties, Massachusetts.

## Table 13.--List of basic-data reports for Massachusetts and New Hampshire (Continued) 1/

#### NEW HAMPSHIRE

- \*1 Southeastern Area, by Edward Bradley and Richard G. Petersen, 1962, 53 p., 5 figs. Covers an area of about 390 square miles in parts of Rockingham and Strafford Counties.
  - 2 Lower Merrimack River valley, by James M. Weigle and Richard Kranes, 1966, 44 p., 1 pl. Covers an area of about 396 square miles in central-southern New Hampshire.
  - 3 Ashuelot River basin, by Harold A. Whitcomb, 1973, 25 p., 1 pl. Covers an area of about 420 square miles in southwestern New Hampshire.
- These reports are available, free of charge, at the U.S. Geological Survey, 150 Causeway Street, Boston, MA 02114. An asterisk indicates that the report is out of print but can be consulted at the above office and at many public and educational institution libraries.

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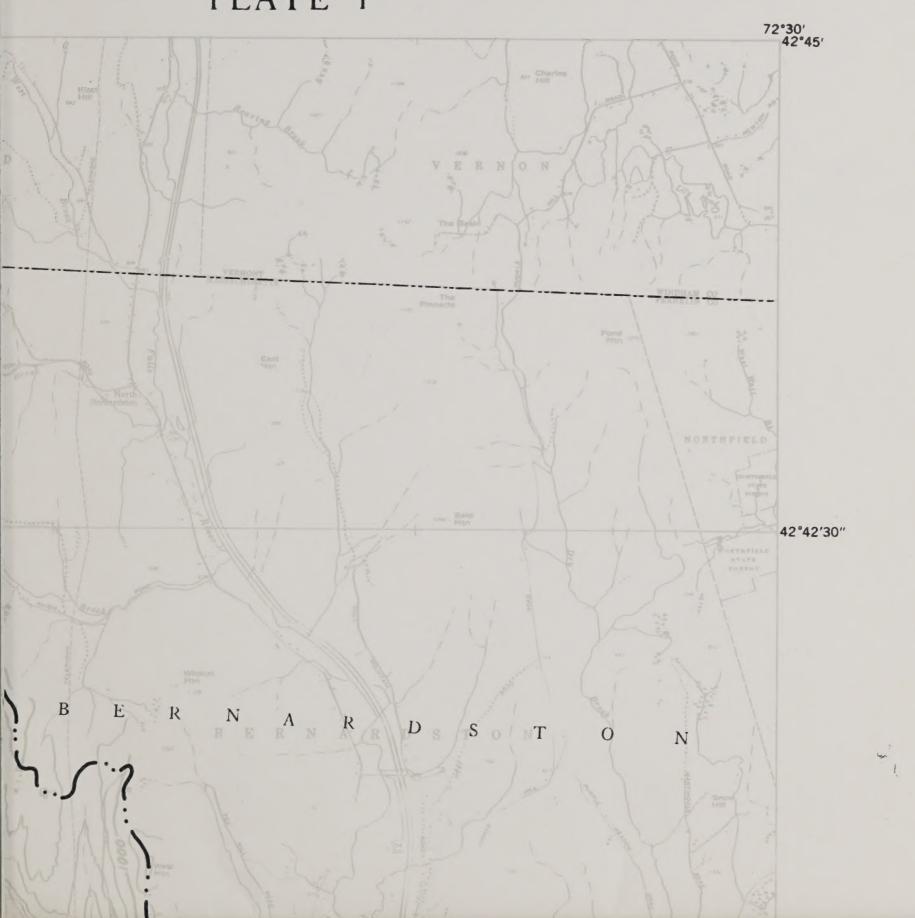
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# ETTS HYDROLOGIC - DATA REPORT NO.13 PLATE 1





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